For the Curious YOUNG GENTLEMEN and LADIES,
That ſtudy and practiſe the noble and commendable ART of DRAWING,
COLOURING and JAPANNING,
A New and Compleat

DRAWING-BOOK;

Conſiſting of Variety of CLASSES, *viz.*
Whole Figures in divers Poſitions, and all the ſeveral Parts of the Human Body from Head to Foot; light, airy, looſe Landſkips; Perſpective Views of Sea-Ports, Forts, Ruins, &c.
Being the cloſe Study, for a Series of Years, of

The late Mr. *LENS*,

Miniature-Painter, and Drawing-Maſter to *Chriſt*'s-Hoſpital.
In Sixty-two Copper-Plates, engraved by himſelf.
Deſign'd chiefly for young Beginners, and now firſt publiſhed from the Author's Originals, very neceſſary and uſeful for all Drawing-Schools, Boarding-Schools, &c. &c.

TO WHICH IS PREFIXED,

An INTRODUCTION to DRAWING;

Containing a Deſcription of the Inſtruments and their reſpective Uſes, and the Materials proper for Drawing; Rules for managing the Pencil, and the beſt Method for attaining Perfection in the ART; with Inſtructions by which a young Practitioner ſhall be enabled to form a Judgment as well of his own Performances as thoſe of others; with eaſy, proper, and neceſſary Leſſons for him at his firſt Entrance. Alſo, the Names of the Colours uſed, with Inſtructions to temper and mix them, and fit them for Painting. Likewiſe, Colours for waſhing Landſkips, or Prints of any Kind; with plain and eaſy Rules for the Ladies Japanning.

Tranſlated from the *French* of Monſieur *GERRARD DE LAIRESSE*, and improved with Extracts from C. A. DU FRESNOY.

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Arthur Bann
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WE whoſe Names are hereunto ſubſcribed, having carefully peruſed the ſeveral Sheets herein contained, recommend them as very proper Pieces to initiate Youth in the Art of DRAWING,

J. Faber, in *Bloomſbury-ſquare*;
S. F. Ravenet, in *York-Buildings*;
G. Scotin, in *Newport-ſtreet*;
L. P. Boitard, in *Lambeth-Marſh*;
S. Wale, in *Long-Acre*; and
S. and *N. Buck*, in the *Temple*.

The INTRODUCTION.

NONE of the Arts, which have been invented for the Uſe or Amuſement of Mankind, can boaſt ſo great a Number of Admirers as that of DRAWING; and very juſtly, for it gives ſuch an agreeable Repreſentation of Things, that we are apt to fancy we ſee Objects which have no real Exiſtence, and that the Imagery before us, which is no more than a painted Cloth, actually breathes. The whole Creation, with all its Works and Wonders, comes within the Power of its Imitation. It ſets before us Things long ſince buried in Oblivion, exhibits to perfect View the moſt noted Actions of People who have been long in their Graves, and ſhews us our Anceſtors, in a perfect Reſemblance of their Features, thro' ſeveral ſucceſſive Generations. There is ſcarce any Art or Profeſſion which receives not ſome Aſſiſtance from DRAWING; without her Help, no Deſigns or Models can be well executed; to her the Mathematician, Architect and Navigator is continually indebted; no Station of Life is exempted from the Practice of it, from the General at the Head of an Army, to the Mechanic, who ſubſiſts by his Handicraft. This excellent Art ſeems inculcated by Nature herſelf, for we ſee it not only practiſed by grown Proficients, but even Children frequently drawing various Figures, and that ſo curiouſly, as even to aſtoniſh us with their Productions.

That therefore Youth may be inſtructed how to attain to a good Degree of Perfection in the Art, we ſhall preſcribe the beſt Rules we are able, at leaſt ſuch, as we apprehend, are abſolutely neceſſary for their Information; after which, we ſhall give them ſome very uſeful and pertinent Inſtructions for their better underſtanding of this Art.

RULES *for the Direction of the young Practitioner in the Art of* DRAWING.

DRAWING may be defined, a Repreſentation, by Lines and Shades, of any Object in Nature or Art; the Imitation of another Draught, or the expreſſing the Likeneſs of ſomething conceived in our own Mind. In Imitations of Nature, or copying from any Draught, the Form and Shape of the Figures is the firſt Thing that makes an Impreſſion on the Mind, which is afterwards reduced into Form by manual Operation, which draws the Lines; hence appears the Neceſſity of frequently employ-

ing the Mind in curiouſly obſerving whatever Objects are propoſed to it, by which Means it will be more capable of conceiving truly and exactly of Objects, and the Hand will more eaſily and juſtly delineate that which is ſo ſtrongly fixed in the Memory.

It is highly neceſſary for him who would draw well, to underſtand what is truly good and beautiful in a Draught: In order to which, the moſt expeditious Method will be, to compare Prints and Draughts together. Many Painters have grievouſly miſcarried, by ſatisfying themſelves only with imitating bad Pieces, without giving any Scope to their own Genius, or improving their Knowledge in judging of the Beauties and Defects of a Picture. The Ideas in our own Minds may in a great Meaſure ſerve us for a Model, and to improve theſe, we ſhould frequently examine the Performances of others, and our Obſervations on Pieces that are eſteemed correctly done, ſhould be nice and critical; we ſhould attentively conſider every Print and Draught we ſee, and every Beauty we find in it, endeavour to fix on our Memory, particularly the Freedom and Boldneſs of the Out-lines, and the Proportion of the ſeveral Parts. Above all Things it is neceſſary that the Judgment be rightly informed, for then the young Practitioner will make the greater and quicker Progreſs in his Improvement, than if he goes on in Practice without encreaſing his Knowledge; for his Succeſs will be more owing to his *Genius* than his Hand.

The Labour of the Hand muſt indeed aid and aſſiſt that of the Brain; for whoever would be an able Artiſt, muſt, by continual Practice, make the Art habitual. The Rules of all Arts are ſoon learned, but to attain Perfection in any of them, a long Practice and ſtrict Attention are abſolutely requiſite. It is a true Maxim, that Lazineſs was never the Parent of any Thing excellent. *Drawing* is not attainable but by a Length of Time, nor Perfection in it acquirable, unleſs the Hand be frequently employed in the Practice, and the Mind in judging; every Day ſhould produce ſomething, and the Hand give frequent Proofs of the Speculations of the Head.

As ſome Part of every Day ſhould be ſpent in the Practice of this Art, we would recommend the Morning as fitteſt for that Purpoſe; which therefore ſhould be employed in perfecting yourſelves both in Judgment and Practice.

He

He who propoſes to gain an Entrance into *Minerva*'s Cabinet, muſt make his Approaches gradually; thus in the Art of *Drawing*, tho' the Repreſentation of the human Figure, or many Figures in a Piece, be the principal Object which every Practitioner has chiefly in View; yet he muſt not make this his firſt Eſſay, but proceed to that by proper and regular Steps. Let the firſt Part of his Study be to draw ſtreight and curved Lines, ſquare, round, regular, irregular and inanimate Figures; alſo Parts of human Figures, as the Eye, the Ear, the Hand, Feet, *&c.* This will be a good Foundation whereon to erect his future Structure; for by this Means he will acquire a Readineſs of Hand, a Freedom and Exactneſs in drawing Lines, and accuſtom himſelf to the Exerciſe of his Patience; Qualifications abſolutely neceſſary for one who would be eſteemed an exact Copier of Nature, eſpecially in Pieces that require a Length of Time, and more than ordinary Skill in the Performance: He who begins well, has more than half perform'd his Work.

The Out-lines are the circumferent Strokes of a Figure; the Perfection of a good Out-line conſiſts in the Freedom and Boldneſs of the Stroke, and the due Proportion of all its Parts: To attain which, the Scholar is admoniſhed to reject all mean and trifling Practices, ſuch as tracing the Originals thro' oil'd Paper, or making uſe of thin Paper for the ſame Purpoſe, or taking Advantage of an artificial Light. The Uſe of ſuch Deceptions will certainly prevent all Progreſs and Improvements in *Drawing*. Neither ſhould the Rule and Compaſſes be uſed, except in *Architecture*, or to raiſe a Perpendicular, in order to form a Square, or ſome other Figure to draw in; or, when an Artiſt has finiſhed his Draught, he takes this Method to compare it with the Original, to ſee whether there is an Agreement between them; however, the bare Eye, if uſed to it, will be ſufficient for ſuch a Diſcernment.

For ſome Time at firſt, be ſatisfied with practiſing upon a good Out-line, without aiming at a finiſhed Piece, nor is it neceſſary that you ſhould, as yet, hatch or ſhade your own Draught; your Out-line at firſt muſt be ſketch'd with ſlight and faint Touches, that you may have an Opportunity to amend it where proper, which ſo will have the leſs Appearance of being retouched. In every Stroke endeavour an exact Imitation, and whenever you mend the Out-line, either by taking away a little of its Parts, or by ſwelling the others, be ſure to loſe nothing of the Freedom and Boldneſs of it. Mind frequently to compare your Copy with the Original, take particular Notice of what is amiſs, and let not the

the leaſt Fault eſcape uncorrected, that ſo in the Draught, which you may afterwards make of the ſame Original, thoſe Errors may be avoided; for you muſt not paſs from one Original to another, 'till you are in a good Degree Maſter of the firſt. The beſt and ſureſt Method of Practice is, to make a great Number of Sketches of the ſame Figure, in each of which endeavour to excel what you did in the former.

In your firſt Operations proceed ſlowly, for haſty Productions are ſeldom beautiful or correct, and a Deſign is often thus ſpoiled in the firſt Attempt; it is no eaſy Matter to amend bad Habits; Expedition in Performance is acquired by a Conſtancy in Practice. As the young Beginner will have frequent Occaſion for the Exerciſe of his Patience, he muſt be careful to ſubdue his Paſſions; in his firſt Attempts he muſt proceed deliberately and ſlowly, and uſe his utmoſt Endeavours to perform well, ſecure every Stroke, and try all his Skill to make one good Draught, rather than to hurry over, in a negligent Manner, a great Number of bad ones.

When you ſit down to work, and all the Time you are at it, take a ſtrict and cloſe View of your Original, and in your Mind divide it into ſeveral Parts; take due Notice of the Length, Breadth, and Similitude of each Part; obſerve the Proportion of each to the other, and to the Whole, the Diſtances between the Parts, and the Parts that lie parallel, or are exactly oppoſite to each other.

When you have finiſhed your Copy, and laid aſide both the Example and Draught, let your Mind be employ'd for ſome Time on other Affairs, then return to it again, and view your Work afreſh, and very probably you will diſcover Faults which did not appear to you before. 'Tis eaſy to imagine, that when the Eyes have been engaged a conſiderable Time on the ſame Object, the Form and Shape of it become familiar to him, and that on a Reviſal his Mind may entertain different Notions of it than in the Light it appear'd before; and aſſure yourſelf, whatever Pains you beſtow in reviewing and comparing your Copy with the original Draught, in order to diſcover and amend your Faults, will not be uſeleſs; but you will find this Advantage in it, that it will be a Means of perfecting you in that particular Draught, and improve you in the Knowledge of Lines, Draughts and Proportions, and by continuing to practiſe this Method, you will in a little Time find yourſelf qualified for the exacteſt Imitations.

Let your Out-lines be large and ſmooth, and drawn in a flowing gliding Manner; for if they are too ſtreight they will carry a diſagreeable Stiffneſs, but if drawn according to this Direction, they will have the Reſemblance of Life and Motion, and appear with an eaſy Grace.

In all your Draughts let there be a perfect Relation between the Parts and the Whole, and Uniformity run thro' the whole Piece, that is, let every Member be made for its own Head, and agree with it; you muſt not put ſtrong Limbs to a Body that is conſumptive, or to old Age in its Decay; nor muſt you be leſs exact in pairing the Eyes, Hands, Legs and Feet, for the leaſt Diſproportion will be a Blemiſh; or when any of the Limbs are not proportionate to the reſt. In the Inſtructions which we ſhall preſently give, the Learner will find Directions to avoid any ſuch Miſtakes and Soleciſms.

When you draw the Muſcles, take Care to inſert them according to the Rules of *Anatomy*; they muſt not be crouded into ſmall Sections, but kept as entire as poſſible, and only the principal Muſcles expreſſed; in a Member which is to expreſs any particular Force, they muſt be ſhewn large, as in the Leg when it ſupports the Body, or in the Arm when it lifts a Weight, *&c.* and be more ſwell'd than in any other Members.

Thus when the Limbs and Members are drawn with few and large Muſcles, they ſhew themſelves with Majeſty and Beauty; ſo in Draperies, the Beauty of which conſiſts not in a Multiplicity of Folds, but in their plain Simplicity and natural Order. The Drapery muſt ſeem to cover the Part looſely, for if it be too cloſe and ſtreight, the Piece will appear too ſtiff; the Plaits muſt be large, folding naturally over the Parts which are to be ſeen underneath, which is done by placing properly the Lights and Shades. In covering both the Extremities of the Joints, ſuch as the Shoulders, Elbows, Knees, *&c.* Care muſt be taken to mark them in ſuch a Manner as to diſtinguiſh their Shape. And in Fact, Drapery is no trifling or inſignificant Part of this Art; for, if well done, it adds a new Grace to the Picture, gives an enlivening Air to its other Beauties, and never fails of pleaſing the Eyes of the Spectator.

The MATERIALS *proper for Drawing.*

THE Materials neceſſary for this Purpoſe, are either Pencils of Black Lead, or Black Lead fixed in a Porcrayon, Charcoal, Chalk black, red and white, Paſtils or Crayons, Pens, Hair-Pencils, and *Indian* Ink.

Nothing is more proper for Beginners to practiſe with than Black Lead, in drawing plain Lines, *&c.* eſpecially as this makes a ſmoother Stroke than can be done by Charcoal or Crayons. Cut your Lead with a Penknife 'till you have brought it to a fine Point, that it may give a neat ſmall Stroke. Or you may fix a Piece of the ſame Lead in a Porcrayon. But whatever it is you ſketch with, uſe yourſelf to hold it long-ways in your Hand, and let your Fingers be much farther from the Point, than the Nip of a Pen is when you write, and let your Strokes be formed with light gentle Touches; thus will you gradually acquire a ready Command of Hand, and you will with Eaſe make your Out-line free and bold.

In practiſing after Limbs and Figures it will be proper, at firſt, to draw the rough Sketch with Charcoal, which is more eaſily diſcharged from Paper than Black Lead. Slit your Charcoal in ſmall ſlender Pieces, one of which fix in a Porcrayon the better to hold it; then ſharpen it to a Point, and lightly, but correctly, ſketch out your Original. When you have ſo done, if there is any Thing you miſlike in the Performance, you may eaſily wipe it out by bruſhing it with a Feather or clean Rag. When you have ſecured your Out-lines with Charcoal, proceed thus; take a Feather and wipe them ſlightly over with it that they may appear faint, then go over the Lines with Black or Red-Lead, and correct them wherever you can. If after all this you ſtill ſee any Errors to amend, take a Bit of Crumb of a ſtale white Loaf, with which you may diſcharge any Part of it you pleaſe, by rubbing it therewith.

You may uſe Red-Lead, or Red or Black Chalk in the ſame Manner as Black-Lead.

If in Heightnings, or when you would give ſtrong Lights, or draw on colour'd Paper, uſe white Chalk and Tobacco-pipe Clay.

Piſtils

Piſtils and *Crayons* are Terms which perhaps the Learner may not readily underſtand; they are Colours mixed up with Tobacco-pipe Clay, which muſt be worked into a Paſte, and rolled up into the Thickneſs of a Quill two or three Inches long, and then dried; when fit for Uſe, the Artiſt works with them on colour'd Paper, but not in Hatchings, as Black and Red-Lead commonly are; the Colours are rubbed and worked together, ſo that there is no ſingle Stroke, but the whole appears as if only a Bruſh had been uſed.

The Crayons is a very expeditious Manner of Drawing, and when ſkilfully handled, always produce a delicate Softneſs and fine Expreſſion; however, it muſt be obſerved, that the careleſs or rude Touch of a Finger may at once blot out all the Beauties of this fine Work; to prevent which, let it be preſerved in Books, or in a Frame under a Glaſs. The Crayons will be work'd more eaſily if the Grain of the Paper be a little rough, and be expreſs'd more ſtrongly than when the Paper is quite ſmooth; or if the Paper be ſomewhat dark or browniſh, or what they call a whited-brown, it will give a Relief to the tender Parts of the Work, by ſhewing the light Strokes of it.

In ſhading Draughts ſometimes Pens are uſed for hatching the croſs Strokes; however, the Hair Pencil and *Indian* Ink ſerve much better for this Uſe, which are not only proper for hatching by Strokes, but for ſhading by a Method much more expeditious, that is, by Waſhing, which is the ſame Way of working as with Hair Pencils and Water Colours. In Hatching, the Shades are produced by Lines, not unlike the Strokes which ſhade a Print engraved; but in Waſhing, no Lines appear, but the Shades ſhew themſelves like thoſe in a *Metzitinto* Print.

Of the Tints of Lights and Shadows.

LIGHTS and Shades, when judiciouſly diſpoſed, give the Appearance of Subſtance, Nature and Diſtance to ſuch Bodies as the Pencil repreſents. Suppoſe, for Inſtance, a Circle drawn on a Piece of Paper; imagine you ſee it fill'd up with any even Colour, you can conceive of it no otherwiſe than as a round, flat equal Body; but if you put the ſtrongeſt of the Colour in the Middle, and weaken it gra-

gradually towards the Extremities, you will perceive an agreeable Deception, and inſtead of a flat even Body, it will have the Reſemblance of a Ball or Globe.

Wherever the Colour appears the moſt lively, there the Object catches the Eye firſt, and ſeems neareſt to it; but where the Colour weakens and goes off, it grows faint, and at length ſeems to fly off and break away from the Sight. Thus the Painter, by breaking and diminiſhing his Colours, throws that behind which he has a Mind ſhall be leſs viſible.

When you round the Parts of an Object, it requires the niceſt Touch of the Pencil to draw the Extremities ſo, as that in turning they ſhall loſe themſelves inſenſibly and confuſedly, without too ſudden a Tranſition of the Light into the Shadows, or of the Shadows into the Light, but let the one paſs into the other as it were reciprocally and imperceptibly, that is, by Degrees of Light into Shadow and Shadow into Light.

When your Objects are to be painted light, you muſt allow a due Breadth of Shadow to ſuſtain them; if dark, a ſudden Light muſt riſe behind them, to ſeparate them from the Ground, or from other Objects that are placed behind them, or elſe they will appear as if they were ſticking upon each other in a confuſed Manner; whereas by a juſt Oppoſition of Light to Shade and Shade to Light, a Projection is given, which makes a Separation of the Objects.

You muſt keep a proper Ballance between Light and Shadows, and in introducing a broad Light into your Draught, you muſt give it a large Shadow. You muſt make your Lights ſerve as a Repoſe to the Darks, and the Darks to the Lights; thus a Drapery, which is coloured red or yellow in ſome Places, in others will take a brown with a good Effect.

The Eye ſees an Object the more ſtrongly and plainly the nearer it is; Diſtance weakens the Sight; the farther off an Object is, the more imperfectly it is perceived; thoſe Objects therefore which ſtand neareſt to View, ſhould be better finiſh'd than thoſe which are thrown behind; but obſerve, that they muſt have a reciprocal Dominion over each other, ſo that as one Object by its Heightenings forces others to appear at a Diſtance, ſo the ſame Object muſt be thrown farther from the Sight, than others which are illuminated more ſtrongly.

It ſhould be farther obſerved in regard to Lights and Shades, that it is not enough that remote Objects be coloured in a more faint and languid Manner, but the more or leſs diſtant they are, the Parts ſhould appear more or leſs confuſed; the Eye cannot minutely diſcriminate an Object which is at a Diſtance from it. We can ſee human Figures at a Street's Length, but cannot diſcern the Features of their Faces or the Plaits in their Cloaths; ſo the innumerable Leaves of a diſtant Grove appear to the Sight but as one Maſs.

White, pure and unmixed, has two different Properties, it draws an Object nearer to it, and it carries it off to a farrher Diſtance. When it is placed with Black, the Oppoſition of Light and Dark brings the Object more into View, and renders it more ſenſible; but pure White, as it is the lighteſt of Colours, will fly off to the remoteſt View, unleſs forced forwards, and ſupported by Black. On the other Hand, pure Black is deemed the heavieſt, moſt earthy and moſt ſenſible of all Colours, and preſents Objects nearer to the Sight; you muſt caſt it into Maſſes, confuſe it inſenſibly, and give it its proper Repoſes.

In the Repreſentations of Bodies, you muſt always give them ſuch *Lights* as are moſt proper and convenient for their ſppoſed Situations. Suppoſe the Objects before you be in the Fields or open Air, and the Sun obſcured with Clouds, your Buſineſs is to introduce an univerſal Light, tho' not vivid or ſtrong, your Shades too muſt be faint. But when the Sun appears in all its Glory, your Lights muſt then be very ſtrong and bold, and the Shadows exceeding dark.

Suppoſe again, that the Object you repreſent is in a Room, a little, tho' not very much illuminated, and to ſurvey it you take your Station without, and ſtand level with the Light that ſtrikes upon it, that Figure muſt have very ſoft Shadows, which will ſhew it very beautifully, and tho' the Shadow be ſo ſoft, yet the Figure will ſeem as if it were emboſſed, and have a very bold Appearance.

When a ſmall Light illuminates a Body, the Shadows on the dark Side appear large, and their Extremities very bold; whereas a large Light renders the Shadows on the darker Side more diſtinct and much ſofter in their Limitations.

Uſeful Inſtructions for the young Practitioner.

WHOEVER would make any Proficiency in the Art of *Drawing*, muſt firſt underſtand *Geometry*; for it is by this, and the Help of Lines, that we are inſtructed to take the Length and Largeneſs of Bodies, and know whether they be ſtreight or curve, round, oval, ſquare, or any other imaginable Figure. But as it is not our Buſineſs here to treat of *Geometry*, or give thoſe Geometrical Rules which are uſed in the Art of *Drawing*, we ſhall refer the Learner to *Le Clerc*'s *Practical Geometry*.

He that would be a perfect Maſter in the Art of *Drawing*, muſt learn to ſketch well, to which therefore he ought to give the greateſt Attention. In copying a Statue, ſome Perſons begin with the Head, which they entirely finiſh before they proceed any farther; by which means it frequently happens, that they either make the Head too little or too big, and the other part ſo diſproportionate, that there is but ſmall Reſemblance of the Original, occaſioned chiefly thro' a Want of duly obſerving Diſtances. When therefore you have any Thing to draw, let your firſt Care be to divide it into its different Parts, then meaſure the Diſtances in the Original with your Eye, mark the Diſtances and Length of each Diviſion with a faint Line on your Paper, and make a Sketch of the whole Figure before you proceed to finiſh any Part of it; ſo will you ſecure the Proportions in the exacteſt Manner.

The Learner will find among theſe Examples ſeveral Draughts of the Parts of the Face, as the Eyes, Noſe, Mouth, *&c.* viewed in different Poſitions, all which he ſhould practiſe upon before he attempts a whole Face; for which Purpoſe we ſhall lay down ſuch Leſſons and Inſtructions concerning an Oval, with its ſeveral Changes and Variations, and of the Croſs in the ſame, as will enable him to figure all Bowings and Returnings, Reclinations and Inclinations of all Sorts of Faces.

The Head, you are to obſerve, has the Shape and Form of an Egg, or Oval; this Head has Eyes, Eye-brows, Noſe and Ears, which muſt be placed in their proper Situations, by running a Croſs thro' the Oval. By this Means you will divide the Perpendicular in the Oval into four equal Parts, which will make the Head to meaſure four Noſes in Height, the Face three only; the Diameter croſſing the Perpendicular, divide into five Parts, each being the Breadth or Wideneſs of one Eye; this Diameter is called the ocular Line, or that whereon the Eyes are to be placed; you muſt therefore draw a ſtreight

Line

Line from the Top of the right Ear thro' both Eyes to the Top of the left Ear; and the Line drawn from the Top of the Head down thro' the Noſe, Mouth and Chin, is called the Perpendicular, croſsing the Diameter or Ocular-line at right Angles; theſe Lines together we call the Croſs of the Oval; upon which Croſs (whatever Situation the Face is in) you muſt place the Eyes, Noſe, Mouth and Ears in proper Places.

When you underſtand this thoroughly, and have fixed it in your Mind, you will ſoon be able to draw good Faces out of your own Fancy and Invention, and execute them in a maſterly Manner: But if you accuſtom yourſelf to draw only after a Print, Draught or Picture, without knowing the Uſe of the Croſs-lines, and the Proportion of a Face with its Parts, you take a wrong Method, don't know what you are about, and will never attain to any Degree of Perfection.

Having thus inſtructed you in the ſeveral Methods of drawing a Face, we come now to give you the Dimenſions and Proportions of the ſeveral Parts of the Body.

It was cuſtomary with the *Antients* to allow eight Heads to their Figures, tho' ſome of them have only ſeven. The Moderns uſually divide a Figure into ten Faces, taking it at the Crown of the Head, and ending at the Sole of the Foot, thus:

From the Crown of the Head to the Forehead, is the third Part of the Face.

The Face takes it Beginning at the Root of the loweſt Hairs on the Forehead, and its End is at the Bottom of the Chin.

Painters divide the Face into three proportional Parts; namely, the Forehead, the Noſe, the Mouth and Chin.

The Diſtance from the Chin to the Pit betwixt the Collar-bones, meaſures two Lengths of a Noſe.

From the ſame Pit to the Bottom of the Breaſt, one Face.

From thence to the Navel, one Face.

From the Navel to the Privities, one Face.

The Diſtance from the Genitals to the upper Part of the Knee, two Faces.

The Knee itſelf meaſures half a Face.

Meaſure from the lower Part of the Knee to the Ancle, and you will find it two Faces.

From the Ancle to the Sole of the Foot, is half a Face.

When a Man ſtretches out his Arms as wide as he can, a line drawn from the Top of the longeſt Finger of the right Hand to the Top of the longeſt Finger on the left, will meaſure the Length of his whole Body, or he will find himſelf as broad as he is long.

The Diſtance from Side to Side of the Breaſts, two Faces.

The Bone of the Arm called *Humerus*, from the Shoulder to the Elbow, meaſures two Faces.

The Bone called *Cubitus*, with part of the Hand, meaſuring from the Tip of the Elbow to the Root of the little Finger contains two Faces.

From the Box of the Shoulder-blade to the Pit betwixt the Collar-bones, is one Face.

In taking the Meaſurement of the Breadth, from the Extremity of one Finger to the other, to ſee if it be equal to the Length of the Body, you are to obſerve that the Boxes of the Elbows with the *Humerus*, and of the *Humerus* with the Shoulder-blade, bear the Proportion of half the Face, when the Arms are ſtretched out.

The Sole of the Foot meaſures the ſixth Part of the Figure.

The Hand is the Length of the Face.

The Thumb, of the Noſe.

From the Place where the Pectoral Muſcle, or that Muſcle which makes the Breaſt, diſappears, to the Middle of the Arm, meaſures four Noſes.

Carry your Meaſure from the Middle of the Arm to the Begining of the Hand, you will find it five Noſes.

Your longeſt Toe is the length of your Noſe.

The Tops of the two Nipples, and the Pit betwixt the two Collar-bones, make an equilateral Triangle.

No certain Meaſures can be given for the Breadth of the Limbs; becauſe even the Meaſures are changeable according to the different Quality of the Perſons, and Movement of the Muſcles.

Theſe farther Rules are to be obſerved in drawing a Head, *viz.*

You muſt ſet the Eyes at ſuch a Diſtance from one another, that you may place one between them.

The Mouth, when ſhut, has the Dimenſions of an Eye.

The Ears are always on a Level with the Eyes, a-top and below with the Noſe, whether it be ſhort or long.

The Noſtril ſhould be placed exactly againſt the Corner of the Eye.

In a Face that is flat, the Cheeks ſwell out, and in one that is lean, the Cheeks fall in, and the Jaw-bones ſtand out.

Having finiſhed our Inſtructions for the drawing of the Face, let us now proceed to draw a Man at full Length.

In the firſt Place you muſt make your Oval, then divide it as before directed; you then draw a Perpendicular Line from the Top of the Head to the Sole of the Foot, which you muſt divide into eight Lengths. This will be a good Direction in placing your Figure upright, or in whatever Action the Poſture requires, where it either falls in or ſwells out. You muſt make the Length of one Head between the Chin and the Breaſts, the third Meaſure muſt reach to the Navel, the fourth from thence to the Genitals, the fifth to the Middle of the Thigh, the ſixth comes to the lower Part of the Knee, the ſeventh to the lower Part of the Leg, and the laſt reaches to the Heel or Sole of the Foot.

In every Meaſure or Diviſion you muſt take particular Notice what Touches there are of the Muſcles.

The Leg muſt be firſt drawn on which the Body ſtands, then the other, after which draw the Arms and Hands. You muſt at firſt draw all the Parts very lightly only with a Coal, becauſe that will give you the leaſt Trouble in rubbing out or altering.

The Hands, you muſt obſerve, are twice as long as broad, and each of their Parts has its particular Length, Breadth and Thickneſs.

The Nail of the Finger makes about half the Joint it is upon.

The Length of the Foot meaſures a ſixth Part or Height of a Man, or five Eighths more in Length than in Breadth.

Take Notice, that the Length of the Face and Hands are exactly equal, and is juſt the tenth Part of a Perſon's Height.

Having thus inſtructed you to draw a complete Man, we ſhall in the next Place lay down ſome Rules for the drawing of Children.

Some will have the Length of a Child to contain five Meaſures of the Head, as thus: From the Top of the Head they make three, and the Thighs and Legs two more; the Breadth between the Shoulders is the Length of a Head and a half; the Breadth of the Body above the Navel, the Length

of one Head; and the Breadth of the thickeſt Part of the Thigh is one Third of two Lengths of the Head; the Breadth of the Knee meaſures exactly the Diſtance between the Eyes and the Chin; the Brawn of the Arm and Small of the Leg are juſt the Thickneſs of the Neck.

If you take the Proportion of a Child ſtanding backward, you will find it of the ſame Meaſure as the former.

If you are deſirous of drawing a Piece well proportioned, you muſt be very careful and attentive to copy all the ſeveral Parts ſingly, as the Eyes, Ears, *&c.*

RULES *for filling up empty Figures.*

THUS far we have treated of Colours and Out-lines; we come now to inſtruct the Learner, how to fill up the empty Figures, and to mark the Hatchings ſo as to produce the beſt Effect.

In the firſt Place obſerve that your Hatchings muſt conſiſt but of two Strokes, croſſing each other, or at moſt three, to make the ſtrongeſt Shades. Where the Cavities are ſuch as require the whole Force of your Lead or Crayon, you muſt rub it upon your Paper as you ſee Occaſion; for it would be a needleſs Trouble to employ more than three Hatchings one upon another.

When with your Charcoal you have drawn the Out-lines, you muſt retouch them with your Red-lead Crayon, and then with a Feather bruſh away the Dirtineſs of the Charcoal. When you have done that, you muſt retouch with a gentle Hand ſuch Places as have been fouled in the rubbing, as the Hair, Eyes, Noſe, Mouth, Fingers, Toes, Out-lines, *&c.* Let me alſo caution you, that in thoſe Out-lines which are open to Day, you make your Strokes very light, but ſtronger in thoſe which are darkened. Thus will the Out-lines appear in a natural Manner, and add a wonderful Beauty and Grace to human Figures and all other Objects. When this is done, you muſt begin the Shades with a ſingle Hatching, but pretty ſtrong; you begin it at the Top, proceeding inſenſibly to the Bottom, as evenly in the Diſtances as you poſſibly can. You then go on to the Roundings, which you muſt alſo expreſs by ſingle Strokes, with ſuch a Light as the Object before you requires; be cautious not to make your Shadows too hard or dark at firſt. If you would preſerve the Perſpective in the beſt Manner, begin the Shadows lightly and faintly, and heighten them afterwards; and you will ſoon be pleaſed with the agreeable Effect.

Inſtructions

Inſtructions how to draw after a Picture, *a* Model, *or the* Life.

HAVING given you the neceſſary Inſtructions for drawing Prints and Draughts, we ſhall, in the laſt Place, direct you how to draw after a *Picture*, a *Model* or the *Life*, and in what Manner you are to place them.

When you have got a Picture to draw after, be ſure to place it in a good Light, ſo that the Sight of your Eye and the Light of the Day may fall together on the Picture. Place yourſelf at a moderate Diſtance, according to the Largeneſs or Smallneſs of the Picture, at leaſt no farther off than that you may, with a Glance of your Eye, ſee the whole Picture at once; for the larger the Picture is, at the greater Diſtance you muſt ſit to draw it. Be careful likewiſe to place your Print exactly right before you, and let it not lie down flat; for if it be laid flat, you will quickly ſee the Figures in it foreſhorten'd. The Paper you draw upon you muſt lay five or ſix Times double upon a Pannel Board ſet in your Lap, and raiſed as high as you can with your Knees, or let it be reſted on a Form or ſtooping Deſk, ſo that your Work may ſtand upon one End before you. Thus will you be enabled to judge of the Similitude between your Draught and the Original, which it will be impoſſible for you to do if it lies flat before you. The next Thing you have to do is, to gueſs as near as you can at the Middle of the Thing you have to draw, whether a Picture or any other Matter; then mark it on your Paper with the Point of your Coal; when you have done this, look for the largeſt Figures (if there happens to be more than one) and touch them lightly in proper Places, and ſo all that is in the Picture, you will then preſently diſcover whether your Gueſſing and Sketching be true or not: But beſides this, before you draw a Stroke, be ſure you do it with good Reaſon and Obſervation, and be very careful about the great and general Parts, and meddle not with the ſmall Breakings 'till the next Sketching, and by conſtantly practiſing in this Manner, you will inſenſibly acquire a Facility and Judgment in your Work. Another Rule you are to obſerve is, always to begin on the right Side of the Figure, for ſo you have the firſt Strokes conſtantly in your Eye, and the reſt will naturally follow and give leſs Trouble: But if you begin on the left Side, your Hand covers the Object from your Sight. Having thus made a rough Sketch, you ſhould carefully review and examine it, and ſee if it be done according to Art, and

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if the Action of the Figure or Figures in it be anſwerable to the Original; now, as Actions are the Life of a Picture, they muſt ſhew themſelves in the firſt Draught however rude it be, or you can never expect it will be happily finiſhed. You muſt then correct your Sketch and improve it in Neatneſs and Air, by adding and diminiſhing as you ſee proper, as you may eaſily do with your Charcoal. But in doing this, be mindful that you don't ſpoil the firſt good Actions in it, which may eaſily be done, if you don't well obſerve the Movements of the ſeveral Parts.

You muſt be careful to admit nothing into your Work that is improper or foreign to the Subject of it, and to let nothing trifling have the chief Place in it.

If you can, always make choice of a *North Light* for your Situation, becauſe it is leſs variable than any other. Should you ſit at a South Window, you will find it proper to place a Saſh of oil'd Paper before it, which will break the Intenſeneſs of the Sun's Rays, and diffuſe them more equally without any ſenſible Variation. In drawing after the *Life*, you are to conſider the Bigneſs or Size of the Object you have to repreſent, and remove from it to the Diſtance of three Times its Magnitude, and be ſeated in ſuch a Manner as that your Eye may be on a Level with it, and at every Stroke you draw be curious to obſerve what Parts of your Object lie under the Perpendicular or principal Line.

The next Thing you have to do is, to put your Figure, whether it be the *Life* or a *Model*, in a proper Poſition; the beſt Light is that which is high and equally diffuſed, not too ſtrong nor glaring; when Objects are ſo diſpoſed you ſee all their Beauties, and the minuteſt Parts ſhew themſelves to Advantage. But this you are to obſerve, that in drawing from the *Life*, that your *Light* ſhould come from ſuch an Altitude, as that the Shadows of Bodies projected on the Plane, be equal, and in proportion to their Height. So that the *Light* does not ſtrike upon or enlighten all the Parts, ſome of which are ſheltered by the Protuberance of others; the Eye-brows over-ſhade the Hollow of the Eye, the Noſe hides ſome Part of the Mouth, and the Throat is obſcur'd by the Chin. For this Reaſon Pourtrait Painters blind all the Windows of the Room they work in, except one, the lower Part whereof they cloſe up, and let the Light in from the upper only, which ſtrikes upon the Object they are painting after, while themſelves are beneath the Light.

Particular Directions for the young Painter.

THE Inſtructions we have hitherto given the young Beginner, have been pretty much in the general; we ſhall now introduce him into every Part of his Work, by ſuch particular Directions, as, by ſtrictly obſerving them, will make him a compleat Draughtſman.

For drawing the Face.

WHEN you have drawn the Circle of the Face (which you muſt do at firſt with a plain circular Line, without making any Bending or Indentures in or out) make a Stroke from that Place of the Forehead which is even with the Chin, down the Place where you intend to fix the Middle of the Noſe, and the Middle of the Mouth; this Stroke, you muſt obſerve, muſt be ſtruck that Way which the Face ſhould turn, either to one Side, or ſtrait down, which Stroke will be a great Help to you in placing the Features rightly, ſo that they may not ſtand all awry, but directly one under another. Now if the Face turn downward, the Stroke muſt be ſtruck in ſuch a Manner that the Eyes may turn anſwerable with the Face downwards; when you have done that, make another Stroke for the Length of the Noſe where the End of it ſhould come, and another Stroke for the Mouth, that it be not made crooked, ſtill obſerving to make all the Strokes to turn one Way, up or down, according as the Face turns, that is, if the Face turns up or down, the Eyes, Noſe and Mouth muſt turn with it; when you have made theſe Strokes exactly, proceed to place the Features according to the preceding Rules.

In the Face is uſually obſerved this threefold Proportion. 1. From the Top of the Forehead to the Eye-brows. 2. From the Eye-brows to the Bottom of the Noſe. 3. From thence to the Bottom of the Chin. This Proportion however is not conſtantly the ſame; for in ſome Perſons the Forehead is lower than in others, the Noſe of ſome longer, and of ſome ſhorter than others; and therefore this Rule can only be obſerv'd in a well proportion'd Face. The Diſtance between the two Eyes is juſt the Length of one Eye, if in a full Face; but if it turn any thing aſide, then that Diſtance is leſſened accordingly; the

Noſtril ought not to come out farther than the Corner of the Eye in any Face, and the Mouth muſt be always placed between the Eyes and the Chin, juſt under the Noſe.

As the greateſt Difficulty, and principal Part of this Art lies in the lively drawing of the Face, I ſhall add theſe farther Directions to perfect you in this particular Branch of your Art.

Firſt, if you would draw a Face exactly, ſo as to reſemble the Original you draw it from; you muſt in the firſt Place take Notice of the Phyſiognomy or Circumference of the Face, whether it be long or round, fat or lean, big or little, that ſo you may be ſure to draw the Phyſiognomy, or Bigneſs of the Face right; if it be a fat Face, you will perceive the Cheeks to make the Side of the Face ſwell out, and ſo make the Face look as if it were ſquare; if it be a lean Face, the Jaw-bone will ſtick out, and the Cheeks fall in, and the Face will look long and ſlender; if it be neither too fat nor too lean, the Face will for the moſt part be round.

When you draw the utmoſt Circumference of a Face, you muſt take in the Head and all with it, otherwiſe you may be deceived in drawing the true Bigneſs of a Face.

Secondly, you muſt carefully and judiciouſly obſerve and diſcern all the Maſter Touches, which give Life to a Face, or diſcover the Grace or Diſpoſition of the Mind, in which lies the whole Grace of the Work, and the Credit of the Workman; thus a ſmiling Countenance is eaſily diſcern'd in the Mouth, when the Corners of it are a little turn'd up; a frowning Countenance in the Forehead, Eye-brows bending, and the Top of the Noſe between the Eyes ſomewhat wrinkled; a ſober and ſtaid Countenance is beſt diſcerned in the Eye, when the upper Eye-lid comes ſomewhat over the Ball of the Eye; a laughing Countenance is eaſily diſcerned all over the Face, and ſo is an angry wrathful Countenance, by extraordinary Frownings; there are alſo ſome Touches about the Eyes and Mouth, which give Life and Spirit to a Face, which you will by Degrees find out by frequently obſerving and imitating the Works of the beſt Maſters.

Further Rules for the young Practitioner in Drawing.

1. YOUR Charcoal being neatly ſharpen'd, you muſt, in the drawing of a Face, firſt lightly draw the Out-ſtroke, or Circumference of the Face exactly, according to the Bigneſs of the Pattern, making it to ſtand fore-right, or to turn upwards or downwards according to your Pattern; then make ſome little Touches, where the Features, namely, the Eyes, Noſe, Mouth, Chin, ſhould be placed, not drawing them exactly at the firſt; when you have thus lightly pointed out the Features, then begin to draw them more exactly, and ſo proceed 'till the Face be finiſhed; which being done, then add the Beard, and other Things about it. In drawing a Side-face, you need not at firſt draw the Noſe, Mouth, and Chin, that ſtand in the outmoſt Line, but only make it firſt but a bare Circumference, turning this Way or that Way, according to the Pattern, and then make the Mouth, Noſe, and Chin, in their Places and juſt Proportion.

2. You muſt be ſure to place the Muſcles in the right and proper Places; by the Muſcles I mean all the Shadows that are cauſed by ſome Dents or Swellings in the Face, and be able to find out the Reaſon of every Muſcle, that ſo you may proceed to work with the more Judgment; the Muſcles will be moſt viſible in an old wither'd Face, and you muſt firſt draw the moſt principal of them, and then you may draw the more eaſily the leſſer within; be ſure to be very exact in the placing of them, or you will ſpoil your Draught be it ever ſo good.

3. Obſerve to make the Shadows rightly, and be careful not to make them too dark where they ſhould be faint; for if you do, you can never recover it to make it light again, and ſo the whole Face will be marr'd, and appear unhandſome; the Shadows are generally fainter and lighter in a fair Face than in a ſwarthy Complexion. When your Draught is finiſhed, you will do well to give ſome hard Touches with your Pen where the Shadows are darkeſt, which will add a great Life and Grace to your Drawing.

When your Face is finiſhed, you come next to the Ears and Hair, wherein you muſt obſerve this Rule: Having drawn the Out-line of it, you muſt firſt draw the principal Curl, or Maſter Stroke in the Hair, which will guide you with eaſe to do the leſſer Curls which depend on them; always make your Curl to bend, and turn exactly according to the Pattern, that they may lie looſe and faſt, and not appear ſtiff,

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ſtubborn and unpliable. When you have drawn your Curls exactly, you muſt in the laſt Place ſtrike in the looſe Hairs which hang careleſsly out of the Curls.

The Face being drawn (which is the principal Thing in the Art) then proceed to the Hands and Arms, Legs and Feet, and ſo to full Bodies of Men and Women, which are the moſt difficult Things, which if you can attain to perform, with a well grounded Celerity, nothing will be difficult to you, but moſt eaſy, as Flowers, Birds, Beaſts, Ships, or any other Thing that is to be drawn by Hand.

Of drawing the Hands and Feet.

WE come now to ſpeak particularly of the Hands and Feet, which you ought to ſpend ſome Time about, before you come to whole Bodies; becauſe they will be too difficult for you to enter upon, till you have pretty well practiſed your Hand in the drawing of other Things, more eſpecially Hands and Feet, which are the moſt difficult Members of the Body to draw, except the Face; by learning of which you will attain the reſt with leſs Difficulty and greater Perfection; and undoubtedly it is a Thing highly commendable to draw a Hand lively and exactly, which hath ſuch a Variety of Poſtures and Action, and you will find it no eaſy Matter to imitate it in every one of them, with Spirit and Life, or without ſome Lameneſs or Imperfection.

The Actions and Poſtures of the Hand are ſo various, that no certain Rule can be given for drawing of them, only this in general; when you firſt draw it with Charcoal, you are not to do it exactly, that is, you muſt not make all the Joints or Veins, or other Things, to appear more than lightly or faintly, and to touch out the Bigneſs of the Hand, and the Manner of turning it with faint Touches, and not with hard Strokes; if you have done that right, then you part the Fingers aſunder, or cloſe, according to your Pattern, with the like faint Strokes; then mark that Place where any of the Fingers ſtand out from the others, and make a faint Reſemblance of it; having ſo done, if you perceive your Draught to be right, proceed to draw it more perfectly, and make the Bending of the Joint, the Wriſt-bone, and other principal Things ſomewhat exactly. And, laſtly, go over it again, and draw every ſmall Bending, or Swelling of the Fingers, and make the Nails, Knuckles, and Veins, ſo many of them as appear, and every Thing elſe that you can diſcern.

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The Proportion of a Hand you have ſufficiently deſcribed in the Print, which ſhews how many Equalities or equal Meaſures there be in it, which you ſhould endeavour to be acquainted with, that ſo you may know when a Hand is well proportion'd with juſt and equal Diſtances. But you are to obſerve this Rule, or Exception, that according as the Hand turns one Way or other, the Proportions muſt be ſhortned, according as they appear to the Eye, as you may ſee by the fore-ſhortning of the Hand in the Print; ſo much as the Hand turns away from our Sight, ſo much it loſes of its ordinary Proportion, and is made to ſhorten unto that Proportion that the Eye judges of it, nay, ſometimes a whole Finger, ſometimes two or three, or more, are loſt to our Sight, by the turning of the Hand another Way from us, and ſo they muſt be wholly left out, and not made. As to the Feet, it is not ſo difficult to draw them as it is the Hands, and you muſt proceed in the ſame Method in the one as in the other. When you can draw Hands and Feet pretty well, then proceed to Arms and Legs, wherein is little Difficulty; after which you may proceed to whole Bodies.

RULES *to be obſerved in drawing the whole Body.*

1. IN the drawing of a Body, you muſt begin with the Head, to which you muſt give juſt Proportion and Bigneſs, becauſe all the Body muſt be proportioned according to the Head.

2. When you have drawn the Head, proceed to the Shoulders, and go on to the Trunk of the Body, beginning at the Arm-pits (leaving the Arms till afterwards) and ſo draw down to the Hips on both Sides, and be ſure you obſerve the exact Breadth of the Waiſt: When you have done thus, draw firſt that Leg on which the Body ſtands, and afterwards that which ſtands looſe, or from the Body, and laſt of all the Arms, and then the Hands, either joined to the Body, or ſeparated from it, agreeable to your Pattern.

3. Obſerve in your drawing to place the parallel Joints, Sinews and Muſcles, directly oppoſite in a ſtrait even Line one againſt the other, as the Shoulders, Arm-pits, Waiſt, Hips, Knees, and ſo every Thing elſe, that one may not be higher or lower than the other, that the Body may not ſeem crooked or deformed, but every parallel Joint, Bend, *&c.* may directly anſwer the other that is oppoſite to it; to which End you may ſtrike a ſtrait Stroke directly croſs the Shoulders, to direct you to place them even and ſtrait one againſt the other, which you may likewiſe do in other Places, as the Arms, Waiſt, Hips, Thighs, or

any other Parts that are oppoſite; where you ſhould place the one even with the other; but you muſt have the ſame Care in all Parts of the Body, as you have in one Place, where any Bendings or Members of the Body have or do require a direct Oppoſition one to the other, you make uſe of this Help and Direction.

4. Obſerve, that if the Body turn one Way or other, then this Stroke muſt be ſo ſtruck, that it may anſwer the Bowing of the Body; thus, if the Body ſtoop a little downwards, you muſt ſtrike the Stroke ſloping or ſide-ways, in which Caſe you muſt make the Shoulders and other Things which ſhould be ſtrait againſt one another, to be ſomewhat higher than one another, ſo that the Side which the Body turns upon, the Shoulders and other Things that otherwiſe ſhould be placed even againſt the other, muſt be made ſomewhat lower than the other Side, more or leſs according to the Stooping of the Body.

5. As you are to be careful in the placing rightly all level or parallel Joints, Bendings, Sinews and Muſcles, ſo you muſt be very exact in all perpendicular Joints, Muſcles, *&c.* that is, when you have drawn the Out-lines of your Piece, and are come to draw the Joints and Muſcles that are within the Body, you muſt be as exact in placing them, that is, directly one againſt another, as you are in placing thoſe even that are oppoſite to one another. To the End that you may place Things exactly perpendicular, that is, in a ſtrait Line one under another, you may ſtrike a ſtrait perpendicular Line from the Pit of the Throat down to the Privities, juſt in the Middle or Seam of the Body, where you diſcern the parting of the Ribs, and from thence ſtrait down to the Feet; which Line will direct you to place Things perpendicularly even, that the Body may ſtand ſtrait upright, and not appear crooked or awry.

6. Take Notice of the Bowings and Bendings that are in the Body, to make that Part which is oppoſite to that which bends, to anſwer to it in bending with it; thus, if one Side of the Body is bent in, the other Side muſt ſtand out anſwerable to the bending in of the other Side; if the Back bend out the Belly muſt bend in; if the Belly come in the Back muſt ſtick out; if the Breech ſtick out, the Thigh that anſwers to it in Oppoſition, muſt come in; ſo alſo in any other Part of the Body; as when the Knee bends out, the Hams that anſwer to it muſt come in; and the ſame Rule muſt ſtrictly be obſerved in all other Joints of the Body, otherwiſe the Body will be made groſly and abſurdly, and without any Proportion.

7. Be careful to make all Things of an equal Proportion and Bigneſs, that one Arm, or Leg, be not bigger than the other, or one Breaſt larger than the other, or any Part of the Body in an unjuſt Propottion; but as every Thing in a Face muſt anſwer to the Bigneſs of the Face, ſo one Member muſt anſwer to another

another in Bigneſs, that ſo there may be a perfect Harmony in all the Parts of the Body; that it may not have broad Shoulders and a thin ſlender Waiſt, a raw-bone Arm and a thick gouty Leg, or any Part diſproportionable from the other, unleſs it be ſo that any Part of the Body doth turn awry from our Eye; thus, if one Arm ſhould be ſeen ſide-ways, and the other fore-right, then the one Arm muſt be made ſo much leſs than the other by how much it turns away from our Sight, and appears leſs to our Eye, and if one Leg be ſeen full or fore-right, and the other Leg be ſeen ſide-ways, then it muſt be made ſo much leſs than the other, by how much it turns away from your Sight.

8. As a juſt Proportion muſt be obſerv'd in the Bigneſs of your Draught, ſo likewiſe in the Length, that one Thing may not be too long for the other, the Body not too long for the Legs, nor the Legs too ſhort for the Body, that neither Leg, nor Arm, be diſproportion'd in their Lengths, but that every Thing have its due Proportion both for Length and Bigneſs; unleſs when the Body ſhortens away in any Part from your Sight; as thus, if one Leg ſtand behind the other, it muſt be made ſo much ſhorter than the other, according to the Diſtance it is removed from your Eye; ſo likewiſe if one Arm remove itſelf ever ſo little out of your Sight, that which comes firſt to the Eye, and ſtands neareſt to the Sight, muſt be made longer than the other, and the other be made ſo much the ſhorter, by how much it turns away from your Sight. So, again, if any Part of the Body be fore-ſhortned, that is, if it appears ſo to your Eye, as to hinder the full Light of the Latitude of that Part of the Body, then the Body, or that Part of the Body muſt be made to ſhorten, according to that Proportion that the Eye judges of it.

9. Obſerve the due Diſtance of one Thing from another, that you may be exact in your Draught, and perfectly imitate your Pattern.

10. Obſerve how much one Part of the Body ſticks out beyond the other, or falls in within the other, or whether it ſtands even with the other; to which End, you may ſtrike a ſmall Stroke down from the Top of the Shoulder along by the Outſide of the Body ſtrait down to the Feet; and this will direct you how far one Part of the Body ſhould ſtand out beyond the other, and how far other Parts ſhould come in; let nothing be done without Rule and Judgment.

11. Let nothing be done, hard, ſharp, or cutty, that is, let not the Bendings that are in the Body or in the Joints, be made as if they were Dents or Cuts in the Fleſh with ſharp corner Strokes, but finely round and ſloping, like Bendings, and not like Cuts in the Body; this is a common Fault among Learners, who

ſhould

ſhould therefore be the more careful to avoid it by imitating their Pattern exactly, in the Manner of making every Stroke and Touch that is given; for nothing ſhould be done without Judgment.

Of Perſpective Proportion.

PERSPECTIVE Proportion differs much from that we have been hitherto deſcribing; and may be defined, The Judgment of the Eye of the Proportion of a Thing by its Diſtance from it; as thus, if one Part of the Body come nearer to the Eye than the other, it is made ſo much bigger than the other Part of the Body, which turns away from the Eye; thus if one Leg ſtand behind another, the foremoſt Leg that ſtands firſt in Sight, muſt be made ſomewhat bigger and longer than the other, becauſe the Eye ſo judges of it; it is the ſame with regard to any other Part of the Body, the Proportion muſt be leſſen'd, according to the Diſtance of the Object from the Eye.

The next Thing to be obſerv'd in good Draughts, is graceful Poſture and proper Action; that is, that the true natural Motion of every Thing be expreſſed in the Life and Spirit of it; that is, the Life muſt be quicken'd by Art; as to expreſs the Majeſty of a King, you muſt put him in ſuch a graceful Poſture, as may move the Spectators with Reverence to behold him; ſo to make a Soldier, you muſt draw him in ſuch a Poſture, as may betoken Courage, Boldneſs, and Intrepidity; ſo to make a Clown, he muſt be ſeen in the moſt deteſtable and clowniſh Poſture; ſo in every other Inſtance, the inward Affection and Diſpoſition of the Mind muſt be expreſſed in the moſt lively Manner in the outward Action and Geſture of the Body. Now to attain a competent Skill herein, my Advice is, diligently to obſerve the Works of our great Maſters, of thoſe eſpecially who delight in deſcribing a Fight at Handi-cuffs; to obſerve the Eyes of private Aſſaſſins, the Courage of Wreſtlers, the Actions of Stage-Players, the enticing Allurements of Courteſans, ſuch as are led to Execution, to mark the contracting of their Brows, the Motions of their Eyes, and the Carriage of their whole Body, to the End you may expreſs them to the Life in your Drawings and Works.

Another Thing to be obſerved in good Draughts, is, Looſeneſs or Air; that is, that the Body be not made ſtiff in any Part, but that every Joint may have its proper and natural Bending, ſo as it may with the greateſt Life expreſs your Intention, that the Picture may not ſeem lame or the Joints ſtiff, as if they were

were not pliable or capable of bending, but every Joint or Limb muſt have its proper and natural Poſture, according as it may beſt ſuit with and become the Poſture in which the Figure is ſet.

Another Thing to be noted in Drawing is, what the Painters call Fore-ſhortening, which is, to take Things as they appear to the Eye, and not to draw the full Length and Proportion of every Part, but to make it ſhorter, by Reaſon the full Length and Bigneſs is hid from our Sight; ſo, if I would draw a Ship ſtanding fore-right, there can appear only her Fore-part, the reſt is hid from our Sight, and therefore cannot be expreſs'd. Again, if I would draw a Horſe ſtanding fore-right, looking full in my Face, I muſt neceſſarily fore-ſhorten him behind, becauſe his Sides and Flanks are hid from my Eye. Obſerve therefore this Rule, That you ought rather to imitate the viſible Proportion of Things, than the proper and natural Proportion of them; for the Eye and the Underſtanding together being directed in the perſpective Art, ought to be the Guide, Meaſure, and Judge of Drawing and Painting.

The laſt Thing to be regarded in good Drawing, is, That every Thing be done by the Guidance of Nature, that is, that nothing be expreſs'd but what accords and agrees with Nature in every Point: As thus, when I would make a Man turning his Head over his Shoulder, I muſt not make him turn more than Nature will permit, nor muſt any thing be forc'd beyond the Limits of Nature, or be made to come ſhort of it; but tho' Nature muſt not be ſtretch'd beyond its Centre, yet it muſt be quickened to the higheſt Pitch of it: Thus, if I would expreſs a King, I muſt expreſs him in the moſt Majeſtick Poſture I can invent; and if I would draw a Clown, I muſt repreſent him in the moſt clowniſh Action I can imagine; yet muſt neither the one nor the other be drawn in ſuch a Poſture as will not agree with the Motion of Nature, that is, in ſuch a Poſture which Man cannot imitate with his natural Body; ſo in all other Things, Nature muſt be the Pattern of all Kinds of Draughts.

Rules *for drawing Landſkips.*

Landskip is the expreſſing a Tract of Land by Hills, Woods, Caſtles, Seas, Valleys, Ruins, Rocks, *&c.* in which there is not ſo much Difficulty as in drawing Figures; and therefore the following Rules will be ſufficient.

1. The beſt Way of making Landſkips, is to repreſent them ſhooting away, one Part lower than another, as hath been practiſed by our beſt Artiſts; but others have run into a contrary Error, by making the Landſkip mount up higher and higher, till it reach to ſuch a Height, that it ſeems as if it touch'd the Clouds, as if the Drawer had ſtood at the Bottom of a Steeple, when he took the Proſpect, which is altogether incongruous; for we can diſcern no Proſpect at the Bottom of a Hill; but the moſt proper Way of making a Landſkip, is to make the neareſt Hill higheſt, and ſo to make the reſt that are at a greater Diſtance, to ſhoot away under that, that the Landſkip may appear as if taken from the Top of an Hill.

2. Be careful to leſſen every Thing in proportion to its Diſtance, expreſſing it bigger or leſs according to the Diſtance it is from the Eye.

3. You muſt make all your Lights fall one Way, both upon the Ground and Trees, and all Things elſe, and all the Shadows muſt be caſt one Way.

4. You muſt give every Thing its proper Motion; as Trees when they are ſhaken with the Wind, their ſmaller and more pliable Boughs muſt be ſhewn in ſuch an Action, as if they ſtruck one againſt another, by yielding and declining from that Part whence the Wind blows; the ſtiffer Boughs have leſs Bending and Motion; you muſt likewiſe obſerve the Bending of a Twig when a Bird ſits upon it, ſo likewiſe if it be forced or preſſed with any other Thing.

Clouds in the Air muſt be ſhewn with Motions now gathered together with the Winds, now violently condenſed into Hail, Thunder-bolts, Lightning, Rain, and ſuch like. Finally, you can make nothing but what requires a Motion peculiar to itſelf, according to which it ought to be repreſented: But this Rule you muſt always obſerve, namely, that all your Motions which are cauſed by the Wind, muſt be ſeen to move one Way, becauſe the Wind can blow but one Way at once.

Always expreſs a fair Horizon, ſhewing the Heavens cloudy or clear, more or leſs according to the Occaſion; and if you expreſs the Sun, let it be either as Riſing or Setting, and as it were behind or over ſome Hill or Mountain.

The Moon and Stars are ſeldom or never depicted, unleſs it be in Repreſentation of Twilight, becauſe all Things are ſuppoſed to be ſeen by Day.

If you expreſs the Sun, make his Light to reflect upon all the Trees, Hills, Mountains, Rocks, or Buildings; ſhading the contrary Side; after which Manner alſo ſhadow Clouds, Miſts, and the like, making the Shadows to fall all one Way.

In

In expreſſing Things at large Diſtances, as ten, twenty or thirty Miles off; where the Object is hard to be diſcerned, as whether it be Temple, Caſtle, Houſe, or the like, ſhew no particular Signs thereof, or any eminent Diſtinction; but rather as weakly, faintly, and confuſedly as the Eye judgeth of it.

If Landſkips be laid in Colours, the farther you go, the more you muſt lighten it with a thin and airy Blue, to make it ſeem as if it were afar off, beginning firſt with a dark Green, ſo driving it by Degrees into a Blue according to the Diſtance.

In Rivers, obſerve the general Current, and Daſhing of the Waves againſt the Boat Sides. In the Sea, obſerve the Waves and other proper Agitations, the Rowling of the Billows, the Tumbling of Veſſels up and down; Ships floating, ſome dipt, ſome half drowned, ſome ſtanding almoſt an End, ſome hid almoſt with the Waves, thro' the Uncertainty of the Surges, others ſtriving to live. In the Motion of Waters falling from an high Place, but eſpecially when they fall upon Rocks or Stones, you muſt make it leaping up in the Air, and ſprinkling all about.

Let your Work imitate the Seaſon you intend it for. Thus, if you intend it for a Winter Piece, repreſent felling of Timber; ſliding upon the Ice; fowling by Night; hunting of Bears or Foxes in the Snow; making the Trees every where naked or laden with a Hoar Froſt; the Earth bare without Greenneſs, Flowers or Cattle; the Air thick; Water frozen, with Carts paſſing over it, and Boys upon it, *&c.*

Laſtly, let every Site have its proper Works, Adjuncts, or additional Graces, as the Farm-houſe, Windmill, Woods, Flocks of Sheep, Herds of Cattle, Pilgrims, Ruins of Temples, Caſtles, Monuments; with a thouſand ſuch other Things, only proper to particular Subjects.

To take the perfect Draught of any Picture.

TAKE a Sheet of fine *Venice* Paper, wet it all over with Linſeed Oil on one Side thereof, which then wipe off as clean as you can; let the Paper dry, and lay it to any painted or printed Picture, then with a black Lead Pencil you may draw it over with Eaſe; put this oiled Paper upon a Sheet of clean white Paper, and with a little pointed Stick or Feather out of a Swallow's Wing, draw over the Stroke which you draw upon the oiled Paper; ſo ſhall you have the exact Form upon the white Paper, which may be ſet out with Colours with pleaſure.

Or

Or thus: The Picture being drawn as before in the oiled Paper, put it upon a Sheet of white Paper, and prick over the Drawing with a Pen; then take ſome Small-coal, powder it fine, and wrap it in a Piece of fine Linnen, and bind it up therein looſely, and clap it over the pricked Line by little and little, and then draw it over again once or twice, with Pen or Pencil.

Or thus: Rub a Sheet of white Paper all over on one Side with Black-lead, or elſe with Vermilion mixed with freſh Butter; lay the coloured Side upon a Sheet of white Paper; then lay the Picture you would copy out upon the other Side of the coloured Paper, or with a ſmall pointed Stick, or Swallow's Quill, go over all the Strokes of your Picture, and it will be exact on the white Paper.

Or thus: Take an oiled Sheet (as before) rub one Side of it with Lamb-black or Lake; lay it upon a Sheet of fair Paper, with the coloured Side downward, and upon it lay the Picture you would copy out, and trace it over with your Swallow's Feather.

Or thus: Take fine Lake mixed with Linſeed Oil, and draw with it over all the Out-ſtrokes, and other material Parts of a Picture; then wet the contrary Side of the Picture, and preſs it hard upon a Sheet of Paper, and it will leave behind it all that which you drew over.

To take the Shape of a Leaf, Herb, or Plant.

HOLD a whole Leaf or Sprig (as of Nettle, Plantane, *&c.*) in the Smoak of Gum Sandrack, Roſin, a Link, or Wax Candle, 'till it is well black'd, which place between the Leaves of a Sheet of White Paper, and carefully preſs upon the Leaf with ſome ſmooth Thing; ſo ſhall you have in a Moment the Print on the Paper, eſpecially the Backſide thereof, with the very Ramifications of the Fibres diſperſed thro' it. This may be of good Uſe in Travelling, when we meet with ſtrange Plants.

To take the Picture of an Herb from an old Picture.

TAKE *Venice* Soap, dip it in Water, and rub or moiſten the old Picture all over very well with it; then put upon it a Piece of white Paper, with other Paper over it, and rub hard thereupon, or preſs them ſtrongly together, and the old Picture will come off exactly upon the white Paper.

Of

Of Colours for Landſkips.

1. FOR a Light Green, uſe Pink, and Maſticot heightened with White; for a Sad Green, Indico, and Pink, heightened with Maſticot.

2. For ſome Trees, take Lake, Umber and White, for others Charcoal and White; for others Black and White, with ſome Green; adding ſome Lake, or Vermilion, with other Colours.

3. For Wood, take Lake, Umber and White, mixing ſometimes a little Green withal.

4. For Fire, lay Red Lead and Vermilion tempered together where it is reddeſt; where it is Blue, lay Oil, Smalt and White Lead; where it is Yellow, take Maſticot, and work it over in certain Places; where you would have it ſhine moſt, with Vermilion.

5. For an Azure Sky, which ſeems afar off, take Oil, Smalt, or Bice, and temper them with Linſeed Oil, but grind them not; for Smalt, or Bice utterly loſe their Colour in grinding.

6. For a Red Sky, take Lake and White; and for Sun-Beams, or Yellow Clouds at Sun-riſing or ſetting, take Maſticot and White.

7. For a Night Sky, or Clouds in a Storm, take Indico deepned with Black, and heightened with White.

8. For Wood Colours, they are compounded either of Umber and White, Charcoal and White, Sea-coal and White, Umber black and white, or with ſome Green added; to which you may adjoin ſometimes, as in Bark of Trees, a little Lake or Vermilion.

How to cleanſe any old Painting.

TAKE wood Aſhes, and ſearce them, or elſe ſome Smalt, or Powder-blue, and with a Spunge and fair Water, gently waſh the Picture you would cleanſe (taking great Care of the Shadows) which done, dry it very well with a clean Cloth.

Then varniſh it over again with good Varniſh, but ſuch as may be waſhed off again with Water if need be.

Or, take either common Varniſh (made with Gum Sandrick diſſolved in Linſeed Oil by boiling) or Glair of Eggs, and with your Pencil go over the Picture once, twice, or more therewith, as need requires.

Of Freſco, or Painting of Walls.

IN painting upon Walls, to make it endure the Weather, you muſt grind your Colours with Lime-water, Milk, or Whey, mixt in Size Colour in Pots.

The Paſte or Plaiſter muſt be made of well-waſh'd Lime, mixt with fine Powder of old Rubbiſh Stones; the Lime muſt be ſo often waſh'd, 'till all its Salt be caſtrated; and all your Work muſt be done in clear and dry Weather.

To make the Work endure, ſtrike into the Wall Stumps of headed Nails, about five or ſix Inches aſunder, and by this Means you may preſerve the Plaiſter from peeling.

Then with this Paſte, plaiſter the Wall a pretty Thickneſs, letting it dry, being dry, plaiſter it over again about the Thickneſs of half a Barley-corn, very fine and ſmooth, then your Colours being ready prepared, work this laſt Plaiſtering over while it is wet, ſo will your Painting unite and join faſt to the Plaiſter, and dry together as a perfect Compoſt.

In Painting be nimble and free, let your Work be bold and ſtrong, but be ſure to be exact, for there can be no Alteration of the firſt Painting, and therefore heighten your Paint enough at firſt, you may deepen it at pleaſure.

All Earthy Colours are beſt; as the Oker, Spaniſh-white, Spaniſh-brown, Terræ-vert, and the like; Mineral Colours are naught.

Laſtly, let your Pencils and Bruſhes be long and ſoft, otherwiſe your Work will not be ſmooth; let your Colours be full, and flow freely from the Pencil or Bruſh, and let your Deſign be perfect at firſt, for in this there is no after Alteration to be made.

Of Waſhing, and other Materials thereof.

BY Waſhing here we intend nothing more, but either to ſet out Maps, or printed Pictures in proper Colours, or elſe to varniſh them.

The Inſtruments and Materials of Waſhing are ſix, *viz.* 1. *Alum-water.* 2. *Size*, or *Gum-water.* 3. *Liquid Gold.* 4. *Pencils.* 5. *Colours.* 6. *Varniſh.*

To make Alum-water: Take Alum, eight Ounces; fair Water, a Quart; boil them till the Alum is diſſolved.

Or thus: Take Spring, or Well-water, a Gallon; Rock Alum, a Pound, beat it to Powder, and diſſolve it in Water by boiling; filter it thro' a brown Paper, and keep it for Uſe: With this Water wet your Paper before you lay on your Colours, it will keep them from ſinking in, and withal, add a Luſtre and Beauty to the Colours laid on: But this you muſt note, that if your Paper is not good, you muſt waſh it over four or five Times, which may be done with a large Pencil Bruſh: Moreover, Alum generally raiſeth ſtaining Colours, and preſerves them from fading.

To make Size: Take Glew, which ſteep all Night in Water, then melt it over the Fire, to ſee that it be neither too ſtrong nor too weak; then let a little of it cool, if it be too ſtiff when it is cold, put more Water to it, if too weak more Glew, uſing it luke-warm.

To make Gum-water: Take pure Spring Water, a Quart; put it into a Jar Glaſs, and hang therein a ſufficient Quantity of pure, white and clean Gum-Arabick, bruiſed and tied up in a Rag; let it hang till the Gum is diſſolved, then put your Fingers into the Water, and if you find them ſtick together as if they were glewed, your Water is too ſtiff, or full of the Gum, which you muſt remedy by putting thereto more fair Water; and if you find it too weak, you may help it by adding more Gum: With this Water, or the former Size, moſt Colours are to be tempered, and with ſo much of the Gum-water, as being touch'd when dry, the Colour will not come off: Where note, that if the Colour gliſten, there is too much Gum in it.

Liquid Gold and Silver: Take five or ſix Leaves of Gold or Silver, which grind (with a ſtiff Gum-lake Water, and a good Quantity of Salt) as ſmall as you can; then put it into a Vial, or glazed Veſſel; add ſo much fair Water as may diſſolve the Gum-water; then let it ſtand four Hours, that the Gold may ſettle;

ſettle; decant the Water, and put in more till the Gold is clean waſhed: To the Gold put more fair Water, a little Sal-Armoniac, and common Salt, digeſting it cloſe for four Days: Then put all into a Piece of thin Glovers Leather (whoſe Grain is peeled off) and hang it up, ſo will the Sal Armoniac fret away, and the Gold remain behind, which keep.

Or thus: Grind fine Leaf Gold with ſtrong or thick Gum-water very fine; and as you grind add more thick Gum-water being very fine, waſh it in a great Shell as you do Bice; then temper it with a little Quantity of Mercury ſublimate, and a little diſſolved Gum to bind it in the Shell, ſhake it, and ſpread the Gold about the Sides thereof, that it may be all of one Colour and Fineneſs, which uſe with fair Water as you do other Colours. The ſame obſerve in liquid Silver; with this Obſervation, That if your Silver by Length of Time, or Humidity of the Air become ruſty; then cover the Place with Juice of Garlick before you lay on the Silver, which will preſerve it.

When you uſe it, temper it with Glair of Eggs, and ſo uſe it with Pen or Pencil. Glair of Eggs is thus made: Take the Whites and beat them with a Spoon, till they riſe all in a Foam; then let them ſtand all Night, and by Morning they will be turned into a clear Water, which is good Glair.

Of Colours ſimple for waſhing of Maps, &c.

ALOES: Let it be diſſolved in a weak Gum-water; it makes a deep or ſad kind of Yellow Colour, according to the Goodneſs of the Yellow.

Brazil: To ſome Ground Brazil put ſmall Beer and Vinegar, of each a ſufficient Quantity, let it boil gently a good while, then put therein Alum in Powder to heighten the Colour, and ſome Gum Arabick to bind it; boil it till it taſte ſtrong on the Tongue, and make a good Red, Pink Colour, or light Violet.

Logwood: Ground Logwood boiled as Brazil, makes a very fair, tranſparent Violet, or Purple Colour.

Cochenele: Steeped as Brazil was boiled, makes a fair, tranſparent Purple: As thus, take Cochenele, and put it into the ſtrongeſt Soap-lees to ſteep, and it will be a fair Purple, which you may lighten and deepen at pleaſure; infuſed in ſtrong Vinegar, it makes a tranſparent Purple.

Madder: Take Madder, four Drams; Ground Brazil, one Ounce; Rain-water, a Quart; boil away a Third Part; then add Alum half an Ounce, boil it to a Pint; then Gum Arabick, one Ounce; which boil

boil till it is diſſolved, cool it ſtirring it often, and ſtrain it for Uſe: It is a good Scarlet Die for Leather.

Verdigriſe: Take Verdigriſe ground finely one Ounce, put to it a good Quantity of common Varniſh, and ſo much Oil of Turpentine, as will make it thin enough to work withal; it is a good Green. Fine Verdigriſe, diſſolved in Rheniſh Wine or Vinegar, makes a tranſparent Green inclining to Blue; ground with Juice of Rue and Gum-water, it is a pure Green; without the Juice, it makes a glorious Emerald; mixed with Cryſtal of Tartar in White Wine Vinegar, in which Gum Arabick has been diſſolved, makes a pure Green. And Verdigriſe, Alum, of each one Dram; Logwood, three Drams; boiled in Vinegar, make a good Murry.

Gambogia: Diſſolve it in fair Spring-water, and it will make a beautiful and tranſparent Yellow; if you would have it ſtronger, to diſſolve ſome Alum therein; it is good for Silk, Linen, White-Leather, Parchment, Vellum, Paper, Quills, *&c.* This Colour delights in no Mixture.

To make Verdigriſe and Ceruſe, according to Glauber.

THESE Colours made with Vinegar in Earthen Pots ſet hot into Horſe-Dung; but if you diſſolve your Venus and Saturn with Spirit of Nitre, and precipitate Venus with a Lye made of the Salt of Tartar, and your Saturn with Salt Water, edulcorating and drying them, the Venus will yield an excellent Verdigriſe, which will not corrode other Colours as the common Verdigriſe does; and the Saturn yields a Ceruſe whiter and purer than the ordinary, and is much better for Painting and Chirurgery.

Yellow Fuſtick-berry: Boil it in Water, or ſteep them in Alum-water, it makes a good and tranſparent Yellow for the ſame Purpoſe.

Turnſole. Put it into a ſharp Vinegar over a gentle Fire till the Vinegar boil and is coloured; then take out the Turnſole and ſqueeze it into the Vinegar, in which diſſolve a little Gum-Arabick; it ſhadows very well on a Carnation or Yellow.

Litmoſe. Cut it into ſmall Pieces, and ſteep it a Day or two in weak Gum-lake Water, and you will have a tranſparent blue Water to waſh with.

Flory Blue. Grind it with Glair of Eggs, if you then add a little Roſſel it makes a light violet Blue; mixed with White and Red-lead, it makes a Crane-feather Colour.

Saffron. Steeped in Vinegar and mixed with a Gum-water is a good Yellow. In White Wine or Sack, it makes alſo a good Yellow; but more glorious if you mix it with equal Parts of Cochenele, you may alſo ſteep it with Glair of Eggs, or grind it with Vermilion.

Indian-Lake. Ground with Gum-Arabick Water, makes a glorious Murry; in grinding it, add a little Sugar-Candy; ſome ſay it makes a deep Pink of a Bloom Colour.

Vermilion. Being ground with Glair of Eggs and Honey or Gum-Water, it makes a deep Red, or Scarlet Colour.

Red-lead. Grind it with a ſtiff Gum-lake Water; if you add Saffron, it makes it Orient, and of a Marigold Colour; of itſelf it is between a Red and an Orange Colour.

Roſſel. Waſhed and tempered with Gum-water, differs not much from Indian-Lake; but it will ſoon fade and grow lighter; but being tempered with Brazil-water, 'twill be more deep.

Indian-Lakes. Uſe them as you do Turnſole; they make a good tranſparent Red Colour; into the Liquor put ſome Gum to bind it.

Maſticott. Ground and tempered with Gum-water, makes a good Yellow, but not tranſparent.

Orpiment. Waſhed and coloured with Gum-water, makes an orient or Gold Colour; there are ſeveral Degrees of it, ſome more red, others more yellow.

Verditure. Waſhed and tempered with Gum-water, it is a good Blue, but not tranſparent, or inclining to Green.

Indico. Ground and tempered with Gum-water, makes a deep Blue, and is fit to ſhadow all other Blues.

Blue Bice. Waſhed and tempered with Gum-water, it is an excellent Blue. There are ſeveral Sorts of it, ſome lighter, ſome ſadder. Blue Bice, Verditure, and Smalt, ground ſingly with Gum-water (or together) make a good Blue.

Smalt. Ground with a little fine Roſſel, makes a deep Violet.

Ultramarine. If you would have it deep, grind it with Litmoſe-water; it is the beſt and deareſt of all Blues.

Sap-

Sap-green. Steep it in ſharp Vinegar all Night, to which add a little Alom to raiſe its Colour. In Alom-water it makes a good Green to ſhadow with.

Green Bice. Waſhed and tempered with Gum-water, makes a good, but no tranſparent Green.

Lamp Black, or Printers Black. Burnt, ground, or tempered with Gum-water, makes a good Black.

Ivory Black. Burnt, ground, and tempered with Gum-water, makes a good Black.

Flake-Lead. Ground and tempered with Gum-water, is an excellent White.

Spaniſh White. Ground and tempered in like Manner with Gum-water, makes the beſt of all Whites.

Spaniſh Brown. Burnt, ground, and tempered with Gum-water, makes a reddiſh Brown, or Liver-Colour.

Umber. Burnt, and ground, and temper'd with Gum-water, makes a good Haw-colour; and is very good to ſhadow with upon Gold.

Green of Walnuts. Boiled in Water, and ſtrained, and Gum-Arabick diſſolved in the Liquor to bind it, makes an excellent Colour to expreſs Highways, Lanes, *&c.*

Wood-Soot. Prepared in all Reſpects as the former, ſerves to the ſame Intentions; and is much the better Colour.

Native Cinnabar. Grind it as Red-Lead; it is a glorious Red Colour, much exceeding the artificial.

Of Compounded Colours for waſhing of Maps, &c.

Orange-Colour. Red-lead and Yellow-berries make a good Orange Colour: Thus, take Arnotto half an Ounce, Pot-aſhes one Drachm, Water one Pound, boil it half away, then ſtrain it, and uſe it hot.

It is good for White-Leather, Paper, Vellum, Quills, Parchment, &c.

Green. Take diſtilled Vinegar, Filings of Copper, digeſt till the Vinegar is blue, which let ſtand in the Sun or a ſlow Fire till it is thick enough, and it will be a good Green.

Or thus: Take Cedar Green (which is beſt of all) or inſtead thereof green Bice, ſteep it in Vinegar and ſtrain it; then grind it well with fair Water, and put to it a little Honey, and dry it well; when you uſe it, mix it with Gum-water.

To make fine Indico. Take the Bloſſoms of Oad three Ounces, Amylum one Ounce, grind them with Urine and ſtrong Vinegar, of which make a Cake, then dry it in the Sun, and ſo keep it for Uſe.

A Blue to waſh upon Paper. Take of the beſt Azure an Ounce, Kermes two Ounces, mix them, which temper with clear Gum-water, and it will be a glorious Colour.

To make a Venice Blue. Take quick Lime, make it into Paſte with ſtrong Vinegar, half an Hour after put thereto more Vinegar to ſoften it; then add Indico in fine Powder one Ounce, mix them, and digeſt it in Horſe-dung for 30 or 40 Days.

Another and excellent Blue. Mix fine white Chalk with Juice of Elder-berries full ripe, to which put a little Alom-water.

To make blue Smalt. Take fluxible Sand, Sal-nitre and Cobalt, mix them together.

A lively Yellow. Diſſolve Orpiment in Gum-water, to which put a little ground Vermilion, grind them together, and you ſhall have a very lively Colour.

A light Green. Take Juice of Rue, Verdigriſe and Saffron, grind them well together and uſe them with Gum-water.

Or thus: Take Sap-green, Flower-de-luce, or Tawny Green, which ſteep in Water. Verditure and Ceruſe mix'd with a little Copper Green, make a good light Colour.

Blue. Ultramarine, blue Bice, Smalt, and Verditure, ground ſingly with Gum-water, or together, make a good Blue.

Brown. Ceruſe, Red-lead, *Engliſh* Oker, and Pink, make a good Brown.

Spaniſh-brown. To colour any Horſe, Dog, or the like, you muſt not calcine it; (yet not calcined it is a dirty Colour) but to ſhadow Vermilion, or lay upon any dark Ground, behind a Picture, to ſhade Berries in the darkeſt Places, or to colour wooden Poſts, Wainſcot, Bodies of Trees and the like, it is very good, (being burnt.)

Fleſh Colour. Mix White, Indian Lake, and Red-lead (according as you would have it light or deep) and to diſtinguiſh a Man's Fleſh from a Woman's, mingle with it a little Oker.

Colours of Stones. Verdigriſe with Varniſh makes an Emerald; with *Florence* Lake, a Ruby; with Ultramarine, a Sapphire.

A never-fading Green: Take Juice of Flowers of Flower-de-luce, put into Gum-water and dry it in the Sun.

Of mixing Colours and Shadowing.

IN mixing be careful not to make the Colour too ſad, nor take the Pencils out of one Colour and put them into another.

In mixing Colours, ſtir them well about the Water ſeverally till they are well mixed; then put them together, making the Colour ſadder or lighter at pleaſure.

Green is ſhadowed with Indico and Yellow-berries.

Blue is ſhadowed with Indico, Litmoſe and Flory; or any of them being ſteeped in Soap-aſhes, and uſed with Gum-water.

Garments are ſhadowed with their own proper Colours; or you may mingle the Colour with white (for the Light) and ſhadow it with the ſame Colour unmingled; or you may take the thinneſt of the Colour for the Light, and ſhadow with the thickeſt or Bottom of the ſame.

Sap-green is only uſed to ſhadow other Greens with, and not to be laid for a Ground in any Garment.

Lake ought not to be ſhadowed with any Colour, for it is a dark Red; but for a Variety you may ſhadow it with Bice, or blue Verditure, which will make it like changeable Taffata.

The Shadow for *Yellow-berries* is Umber; but for Beauty's Sake with Red-lead, and the darkeſt Touches with *Spaniſh* Brown; and for Variety with Copper-green, blue Bice or Verditure.

White ſets off *Blues* and *Blacks* very well; *Red* ſets off well with Yellow; Yellows with Reds; ſad Blues, Browns, Greens, and Purples.

Blues ſet off well with Yellows, Reds, Whites, Browns, and Blacks; and *Green* ſets off well with Purples, and Reds.

More eſpecially, all light Colours are ſhadowed with Colours of the ſame Nature, but more ſad; as for Example: *Vermillion* is ſhadowed with Lake, or *Spaniſh* Brown: *Verditer* and *Bice* are ſhadowed with Indico: *Camboge* and *Yellow-berries*. are ſhadowed with Umber, with Red-lead, or Vermillion: *Red-lead* is ſhadowed with Lake, or *Spaniſh* Brown: *Maſticote* is ſhadowed with red Orpiment: *Spaniſh* Brown is

ſhadowed with burnt Umber, with Braſil-water: *Umber* is ſhadowed with Umber burnt: *Roſſet* and *Braſil*, are ſhadowed with *Spaniſh* Brown mixed with Braſil-water: *Verdigriſe* is ſhadowed with Indico mixed with Yellow-berry Water: *Wood Soot* and *Walnut Shells* are ſhadowed with Umber.

From the Mixtures of the forementioned Colours, infinite Varieties almoſt may ariſe, even whatſoever one pleaſes: But for our Purpoſe of waſhing *Maps*, *Gloves*, *Pictures*, *Landſkips*, &c. the moſt tranſparent Colours are principal; of which theſe are chief, *viz. Braſil*, *Logwood*, *Indian Cake*, *Turn-ſole*, *Cambogie*, *Saffron*, *Yellow-berries*, *Litmoſe*, *Sap-green*, *Verdigriſe*, *Wood-ſoot*, *Green Walnut-ſhells*; of theſe you may by Mixture make ſeveral Compounds; as,

A Compound Green: Mix Verdigriſe Water with Yellow-berry Water; it will be tranſparent, and you may make it deeper or lighter according to the Proportion that you take of either.

A Compound Blue Colour: Mix Litmoſe-water with Yellow-berry Water, and you will have a tranſparent ſad Blue, which you may heighten or deepen as the former at pleaſure.

A Compound Orange Colour: It is made by mixing Braſil Water with Yellow-berry Water of a tranſparent Colour.

Of Colours for waſhing Landſkips.

GREEN mixed with White, Pink, Bice, Maſticot, Smalt, Indico, or Ceruſe; or Blue Verditure mix'd with a few Yellow-berries makes a good Green for *Landſkips*.

For the *ſaddeſt Hills*, uſe Umber burnt; for the *lighteſt Places*, put Yellow to the burnt Umber; for *other Hills*, lay Copper-green thickened on the Fire, or in the Sun; for the next *Hills farther off*, mix Yellow-berries with Copper-green; let the fourth Part be done with green Verditure; and the *fartheſt and fainteſt Places* with blue Bice, or blue Verditure, mingled with White, and ſhadowed with blue Verditure, in the Shadows indifferent thick.

Let the *Highways* be done with white and red Lead, and for Variety yellow Oker; ſhadow it with burnt Umber, which you may uſe for ſandy Rocks and Hills.

Rocks may be done with ſeveral Colours, in ſome Places black and white, in other Places red and white, and others blue and white, and the like as you ſee convenient.

The

The Water muſt be black Verditure and white, ſhadowed with green and blue Verditure, when the Banks caſt a green Shadow upon the Water, and the Water is black ſhadowed, then ſhade it with Indico, Green thickened, and blue Verditure.

Colour *Buildings* with as much Variety of pleaſant Colours as may be imaginable, yet let Reaſon be your Rule in mixing your Colours: You may ſometimes uſe White and Black for the *Wall, Conduits*, or other Things. For *Brick Houſes* and the like, red Lead and white; if *many Houſes* ſtand together, ſet them off with Variety of Colours, as Umber and White, Lake and White, Red Lead and White, and the like.

Laſtly, *for the Sky*, uſe Maſticot, or Yellow-berries, and White for the *lighteſt and loweſt Places*; red Roſſet, and white for the *next Degree*; blue Bice, and white for *the other*; blue Bice, or Blue for *the higheſt*.

Theſe Degrees and Colours muſt be ſo wrought together, that the Edge of each Colour may not receive any Sharpneſs; that is, ſo as that you cannot perceive where you began to lay them, being ſo drowned one in another.

Of the Practice of Waſhing.

WITH the *Alom-water* wet over the Picture to be coloured, for that keeps the Colours from ſinking into the Paper, and will add a Luſtre unto them, make them ſhew fairer, and keep them from fading.

Then let the Paper dry of itſelf (being waſhed with *Alom-water*) before you lay on the Colours; or before you wet it again, for ſome Paper will need wetting four or five Times.

The Waſhing of the Paper muſt be done with a large Pencil Bruſh.

But if you intend to varniſh your Pictures after you have coloured them, inſtead of waſhing them with Alom-water, firſt ſize them with new Size made of good white Starch, with a very fine Bruſh; and this you muſt be ſure to do all over, for elſe the Varniſh will ſink through.

Having thus prepared your Work, go to laying on your Colours according to your former Directions, ſuiting them as near as may be, to the Life of every Thing.

But

But before you lay on your Colours, you muſt know how to temper them; which you may do in this Manner: 1. Such Colours as are ground with fair Water; take a ſmall Quantity of them, put it into a Horſe Muſſle-ſhell, putting thereto ſome Gum-water, and the Colour in a little Time will be ſoftened; then with your Finger being very clean, bruiſe the Colour againſt the Shell, till you find no Knot undiſſolved; after with a clean Pencil ſtroke down the Colour to the Bottom of the Shell, and it is fit for Uſe; if it be too thick, add more Gum-water to it. 2. Such Colours as are waſhed you muſt temper in a Shell with Gum-water, in the ſame Manner as the former. 3. Such Colours as are ſteeped, the Liquor only of them is to be uſed without any other Preparation.

The Picture being painted, you may with Size paſte your Maps or Pictures upon Cloth, thus: Wet the Sheet or Cloth therein, wring it out, and ſtrain it upon a Frame, or nail it upon a Wall or Board, and ſo paſte your Maps or Pictures thereon.

Laſtly, if the Picture be to be varniſhed, having thus fixed it into its proper Frame, then varniſh it with a proper Varniſh (by the following Rules) and the Work will be fully finiſhed.

How to lay on your Colours.

FIRST provide yourſelf of Pencils of ſeveral Sizes, and if you will be curious, you ought to have a great and a ſmall to each reſpective Colour; if not, you muſt always have by you a Diſh of fair Water, in which you muſt waſh and cleanſe your Pencil, wiping it with a clean Linen Cloth, before you put it into another Colour.

For your Pencils, chuſe thoſe that are good, thus: See that they be fulleſt next the Quill, deſcending or leſſening into a ſmall Room or ſharp Point, which you may ſee by putting the Hair into your Mouth, and drawing it thro' your Lips once or twice, then you will ſee what it is, and if you find any ſtragling Hairs, ſinge them off with the Flame of a Candle.

Being thus provided with Colours and Pencils, if you deſign to lay any Colour about the Edges of any Map, Part, Piece, or Diviſion of Ground, in a Plat; as ſuppoſe you would incloſe a particular Field, or Cloſe in a Meadow, with Yellow; with your Pencil take Camboge, or Yellow-berry Water a very ſmall Quantity, and on the Inſide of the Black Lead Line draw the Colour along of an equal Breadth (as near

as

as you can) from the Line, broader or narrower as your Field is in Bigneſs; not daubing the Field or Cloſe all over with the Colour, which would be but an Abuſe to your Map or Plat.

Then having gone round the Cloſe or Field in this Manner, with your Colour, wet your Pencil in your Mouth, or have by you a ſmall Quantity of Water to dip it in, and ſtrike along the Inſide of the coloured Line, bringing it more down towards the Center of the Field; and this will ſweeten your Colour, and make it ſhew as if it loſt itſelf by Degrees, to the very Colour of your Paper or Parchment. This Courſe is to be taken not only for Yellows, but for all other Colours. Laſtly, with a Pen (if you cannot do it handſomely with a Pencil) take ſome of the Colour which ſhadows the Colour you have already uſed about the Field, and go over your Black-lead only, ſo ſhall your Field be finiſhed.

Laſtly, after the ſame Manner you may adorn all the Parts in your Plat or Map, of divers Colours; obſerving this, that you colour not two Fields adjoining to one another both of the ſame Colour; and therefore it behoves you to know what Colours do ſet off one another beſt; and as near as you can, to lay Cloſes or Fields, adjoining to one another, of two ſuch Colours, that one Shadow may ſerve both.

Of the making of Varniſhes.

VARNISH for painting in Oil. Take Maſtick, two Ounces; Oil of Turpentine, one Ounce; put the Maſtick in Powder into Oil, and melt it over the Fire, letting it boil little or nothing, leſt it be clammy; when it is enough you may know by putting in a Hen's Feather, for then it will burn it.

Varniſh for painted Pictures. Take White Roſin, one Pound; Plum-tree Gum (or Gum-arabick) Venice Turpentine, Linſeed Oil, of each two Ounces; firſt melt the Roſin and ſtrain it very hot; ſteep the Gum in Oil Olive (Oil of Ben is better) till it is diſſolved, and ſtrain it, to which put the Turpentine and Roſin, and over a ſlow Fire mingle them all till they are well diſſolved: When you uſe it, uſe it hot.

Another for the ſame. Take Olibanum and Gum Sandrick in Powder, which mingle with Venice Turpentine, melting and incorporating them ſtill over a gentle Fire, then ſtrain it hot.

When you uſe it let it be hot, and your Varniſh will ſhew well; it dries immediately.

Another for the ſame. Take Oil of Linſeed, which diſtil in a Glaſs Retort, one Ounce; fair Amber diſſolved, three Ounces; mix them over a ſlow Fire, and it is done.

A very good Varniſh for Gold, Silver, Braſs, Iron, Stone, Wood, Vellum, or Paper. Take Benjamin

(made into a fine Powder between two Papers) put it into a Vial, and cover it with Spirit of Wine four Fingers above it, and let it ſtand three or four Days; then ſtrain it, and it will be bright and ſhining, drying immediately, and retaining its Brightneſs many Years.

If you varniſh Gold, or any thing gilded before the Straining, you ſhould put in a few Blades of Saffron for Colour-ſake; but if Silver or any thing white, you ought to uſe the white Part of Benjamin only.

A Varniſh particularly for Gold, Silver, Tin, or Copper. Take Linſeed Oil ſix Ounces, Maſtick, Aloes, Epatick, of each one Ounce; put the Gums in Powder into the Oil, into a glazed Earthen Pot, which cover with another boiling them together, in the Bottom of which let be a Hole, whereinto put a ſmall Stick with a broad End to ſtir withal; cover them all over with Clay, except the Hole, ſet it over the Fire, and ſtir it as often as it ſeetheth for a little while, then ſtrain it for Uſe. Firſt let the Metal be poliſhed, then ſtrike it over with this Varniſh.

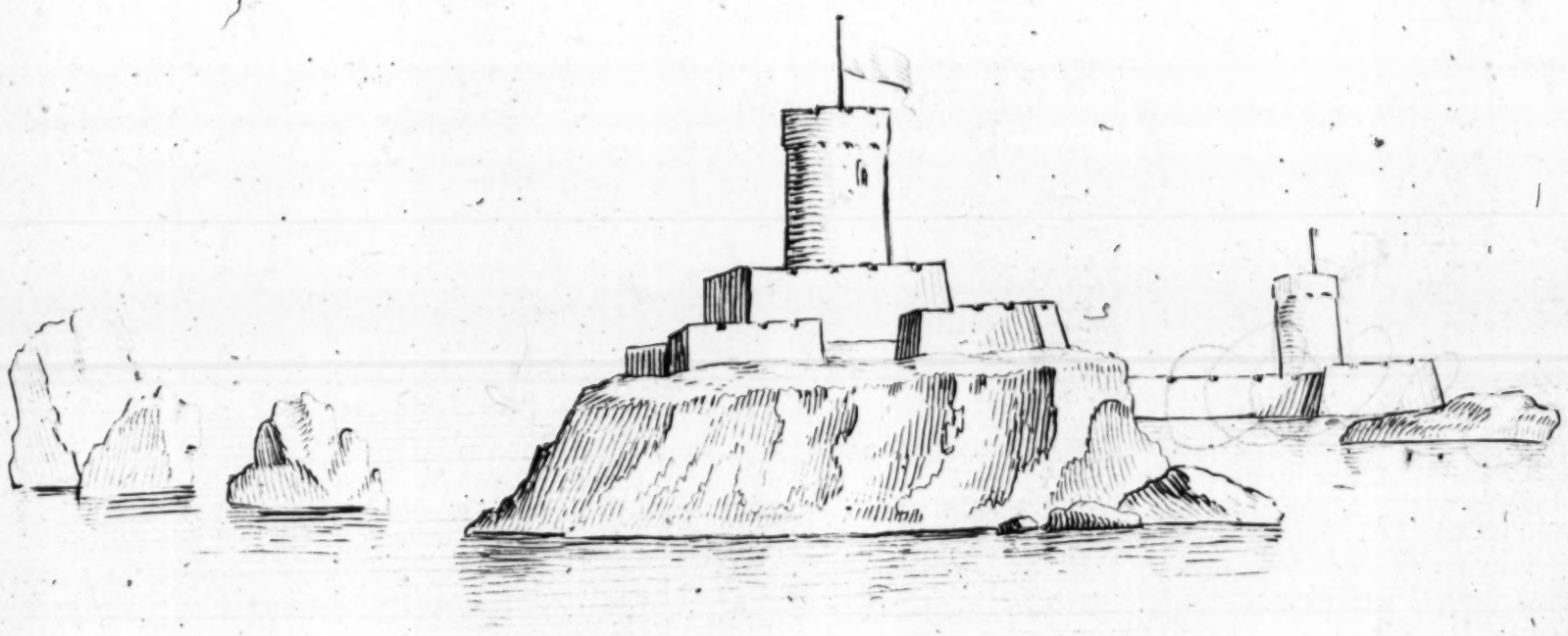
A Varniſh for Wood and Leather. Take Tincture of Saffron, or Turmerick in Spirit of Wine a Pint, prepared Gum-lake a ſufficient Quantity; diſſolve the Gum in the Tincture and it is done.

This is a Varniſh of great Uſe to lay over Gold, and Silver, or any thing which is expoſed to the Air.

To make the Common Varniſh. Take Spirit of Wine a Quart, Roſin one Ounce, Gum-lake a ſufficient Quantity; diſſolve the Gum in a gentle Heat, (being cloſe covered) and let them ſettle; then gently decant off the Clear, which keep in a cloſe Glaſs-bottle for Uſe.

Directions for making the Ladies WHITE JAPAN.

TAKE Whiting, the Quantity of three or four Balls; ſlake it with Water in a large Pot; let it ſtand a Quarter of an Hour; then ſtir it, and pour the Top off into another Veſſel, and ſo repeat it 'till it becomes very fine; then take ſome Parchment Size and mix with it, and lay it on the Cabinet with a Camel-Hair Tool; let it dry well, and ſo repeat it three or four Times; then rub it with *Indian* Reed till it is ſmooth; then take ſome Pearl white, or Flake white, mix them with your Gum-water, and work them on a Stone 'till it is very fine; then lay it on as before, once or twice as Occaſions require. Your Ground being thus prepar'd, take the White of an Egg and dip it according to the Form of your Print, and lay it ſmooth on your Cabinet; then dry it exceeding well, and do all your Prints over with Gum-water; and when they have ſtood one Day, then varniſh it with a Camel's Hair Tool, which you muſt repeat three or four Times before a Fire.



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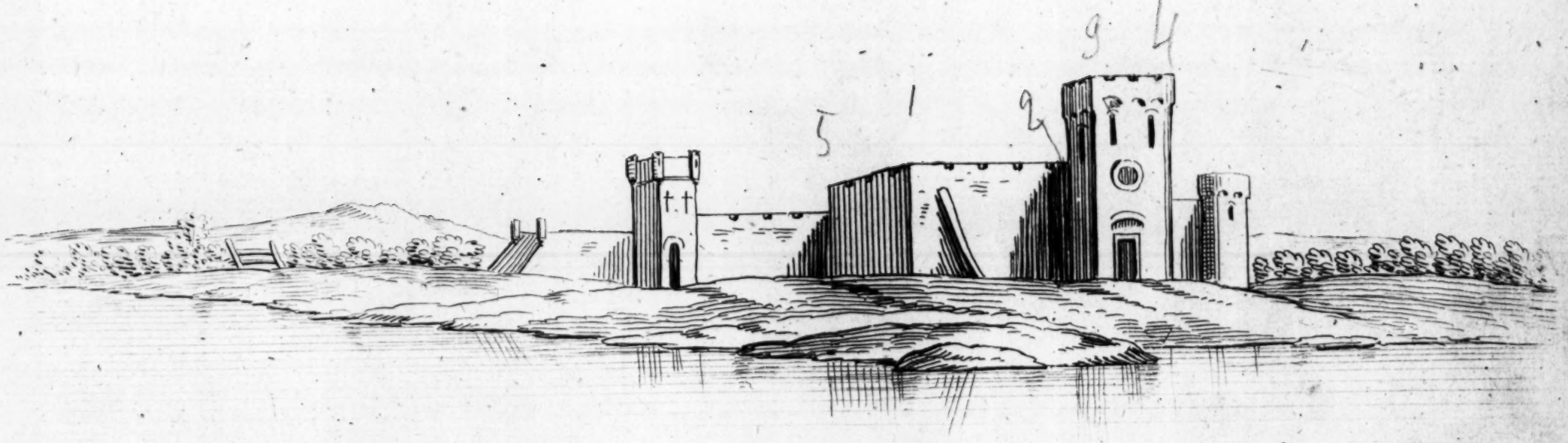

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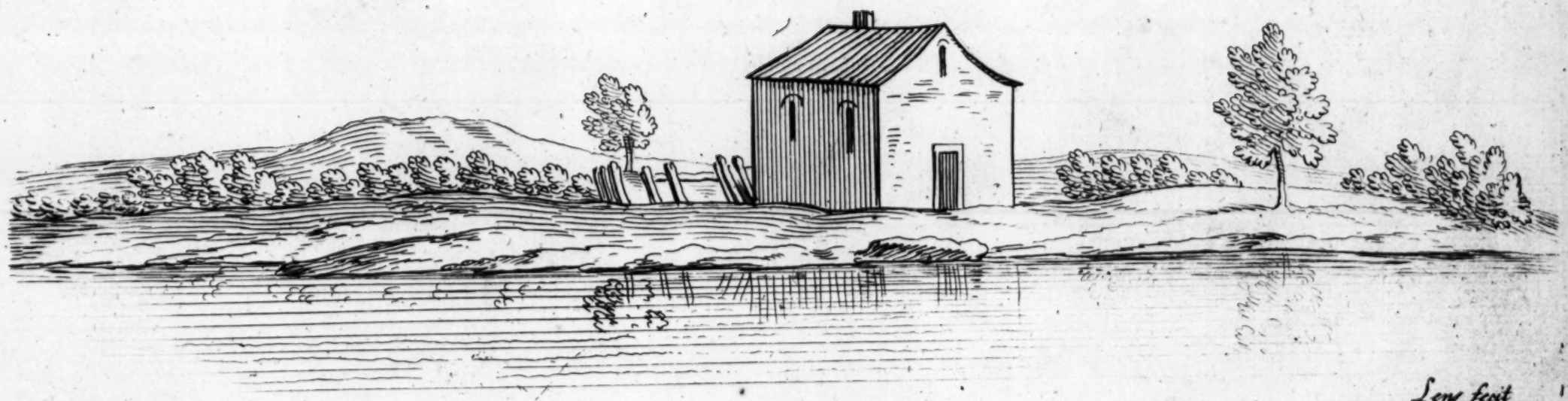

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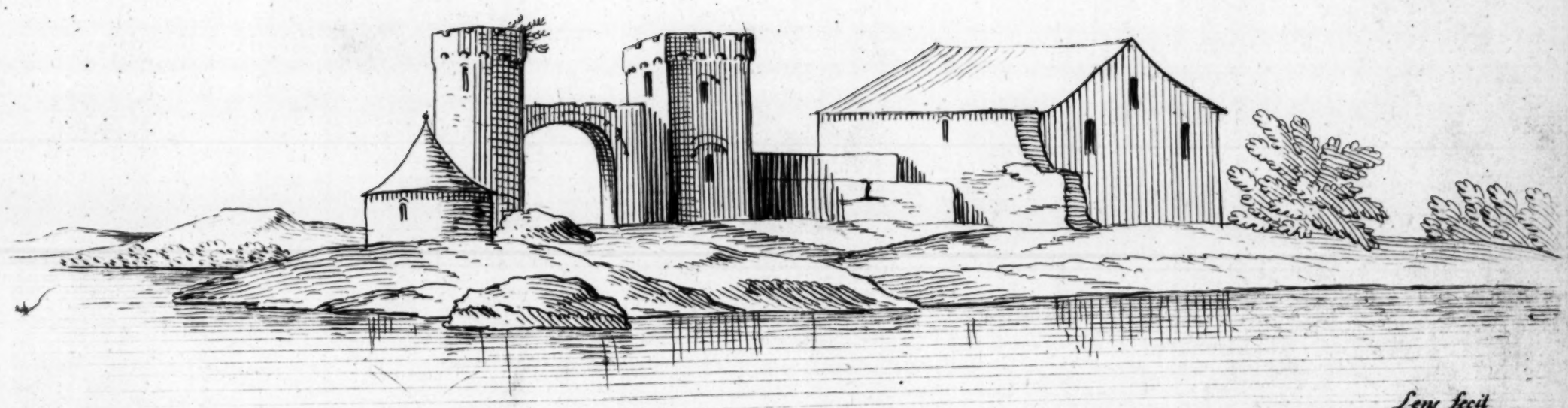

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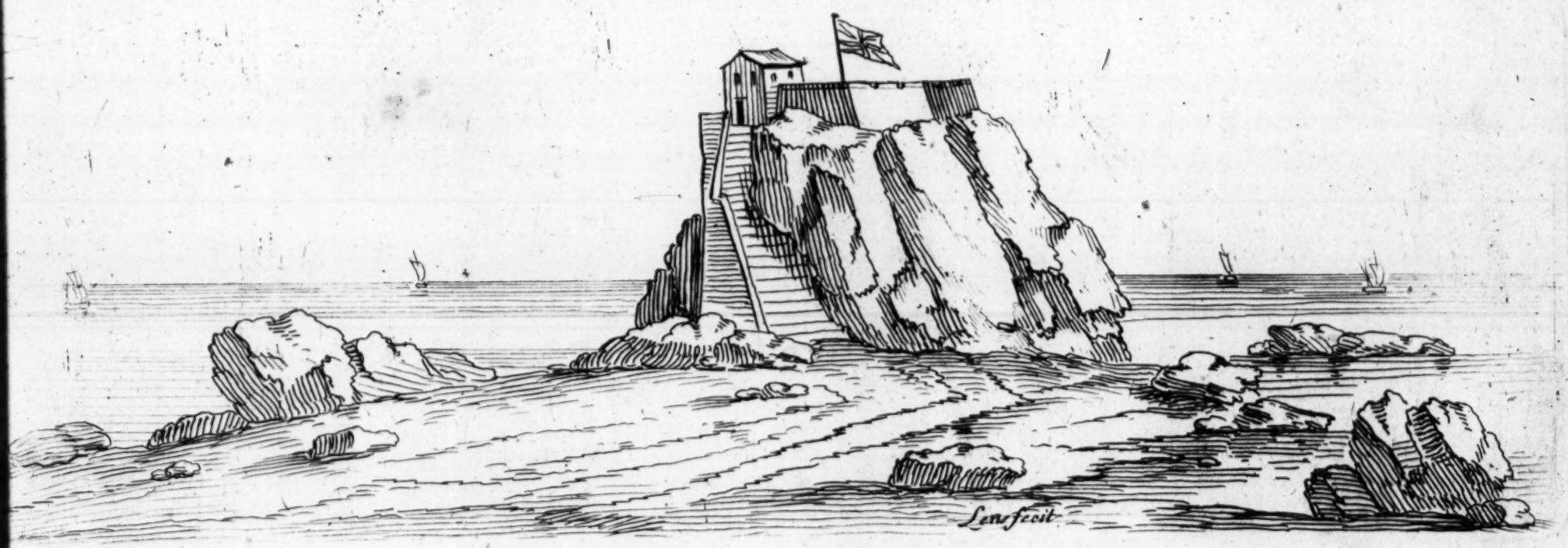
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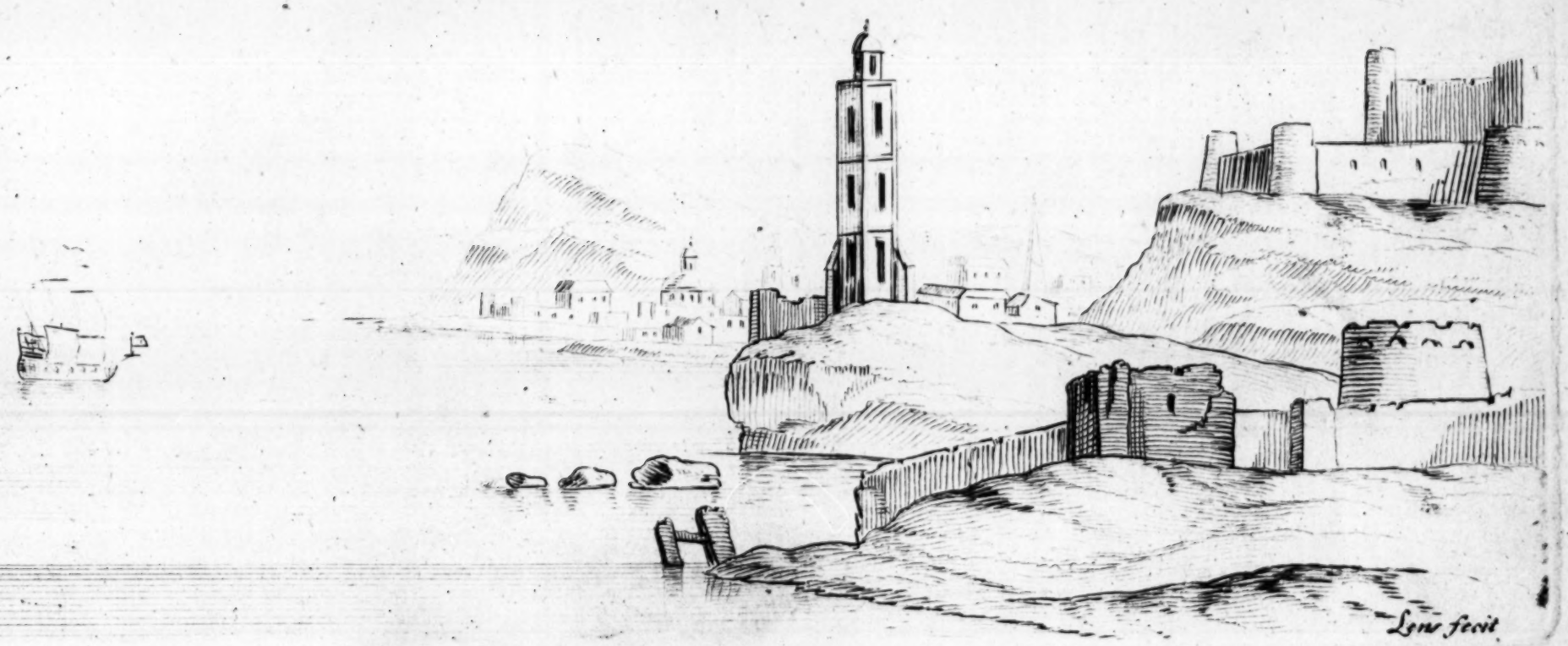
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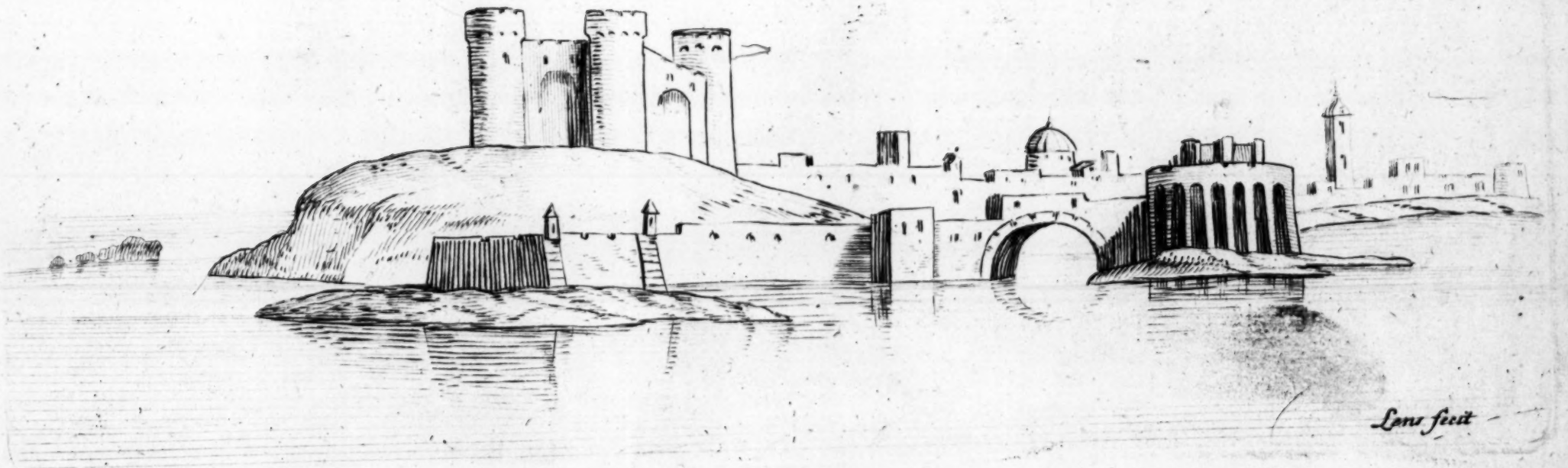

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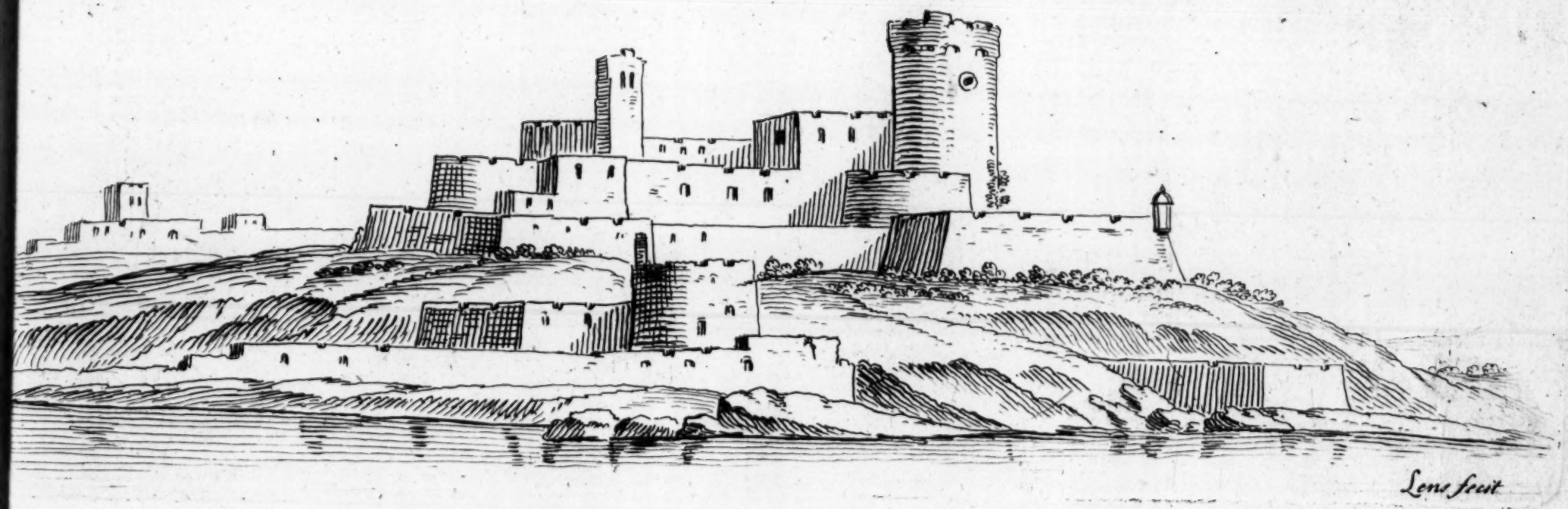

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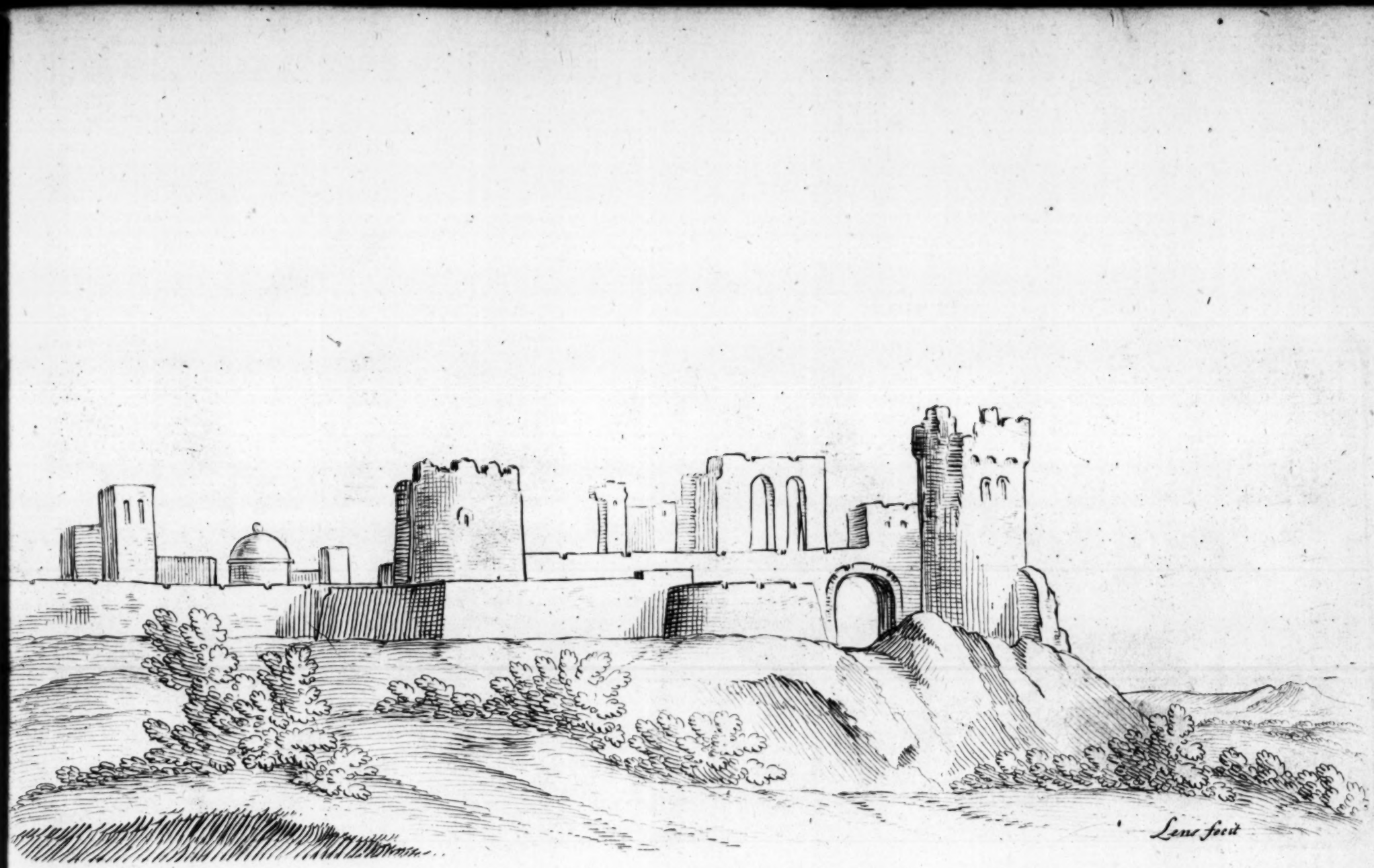
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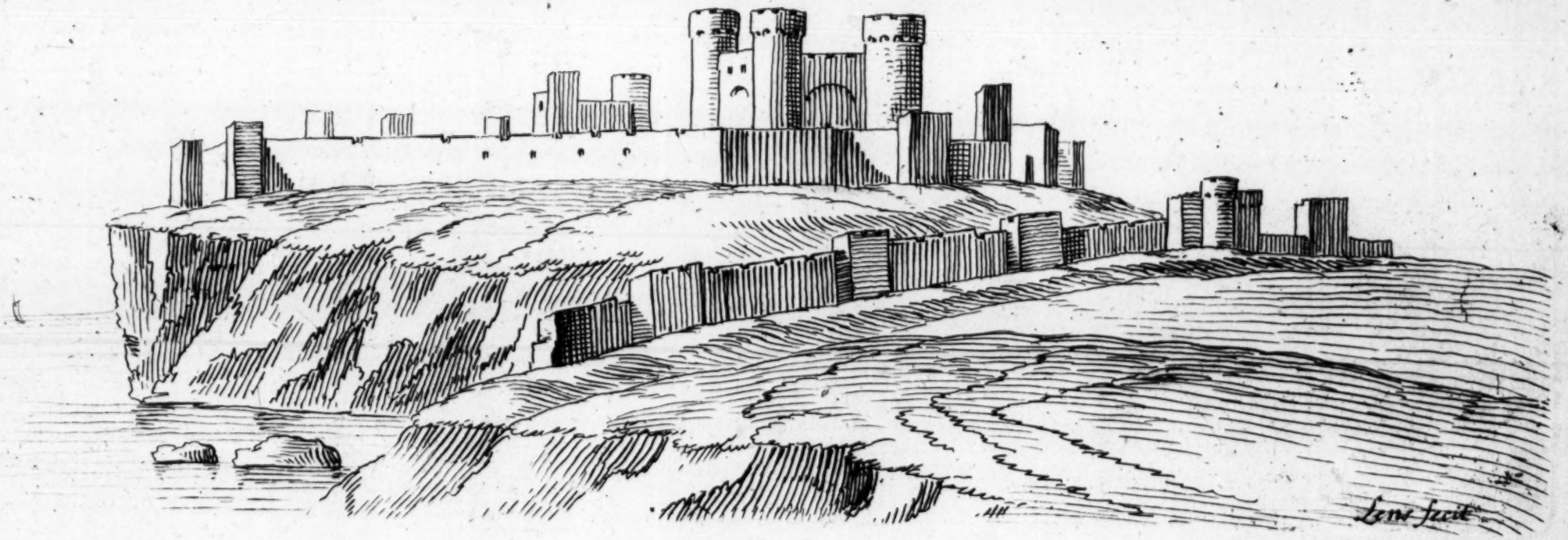

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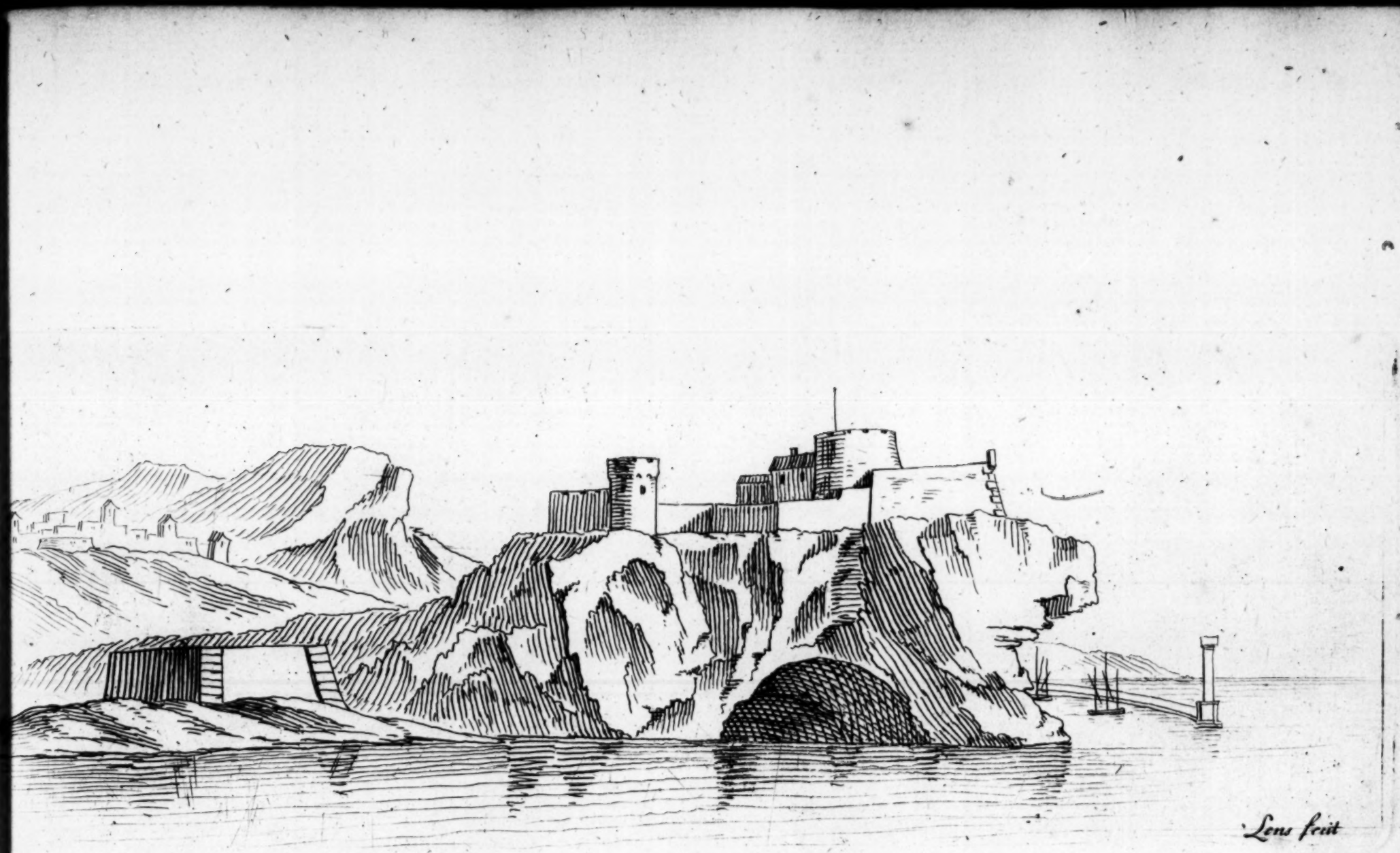

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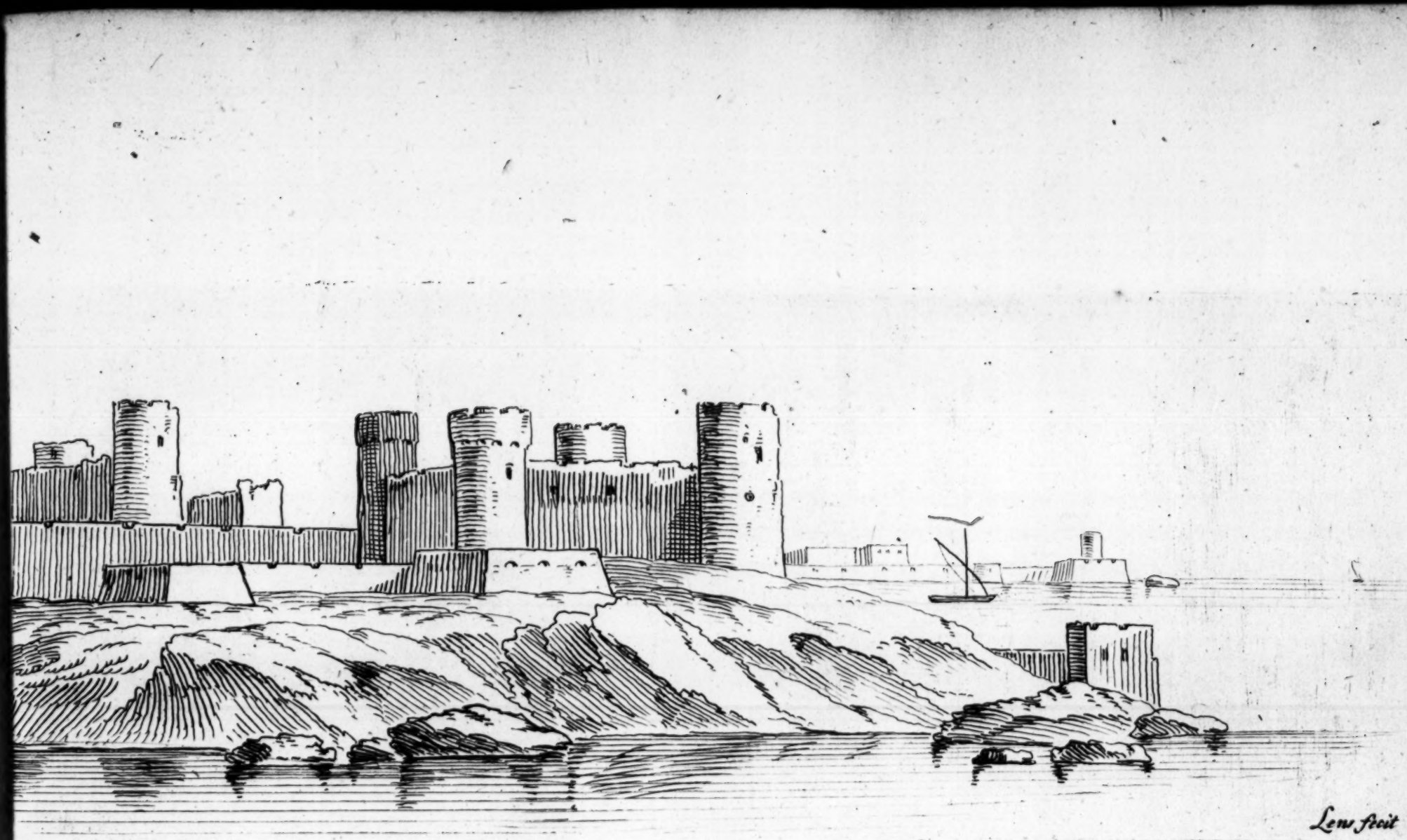

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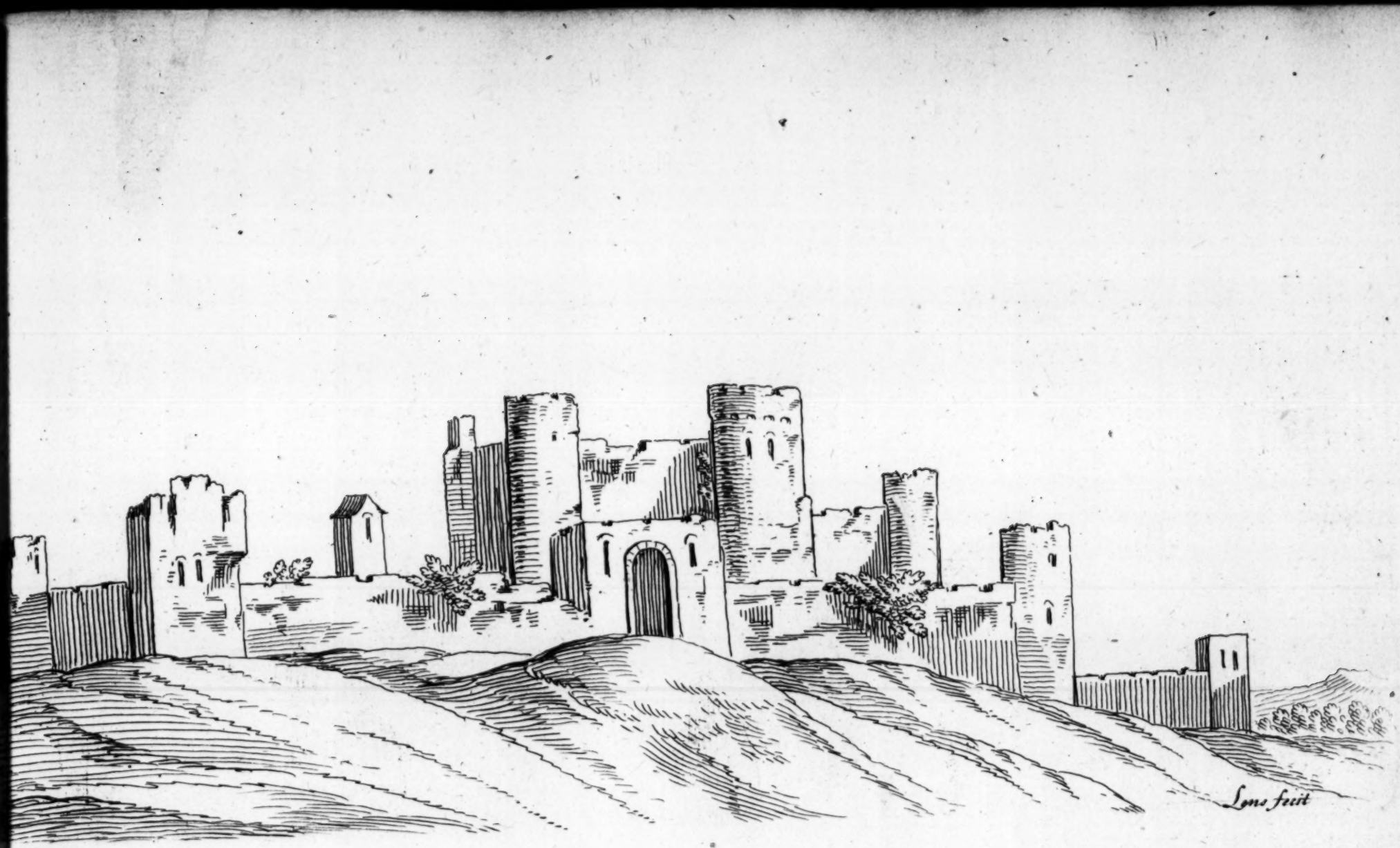
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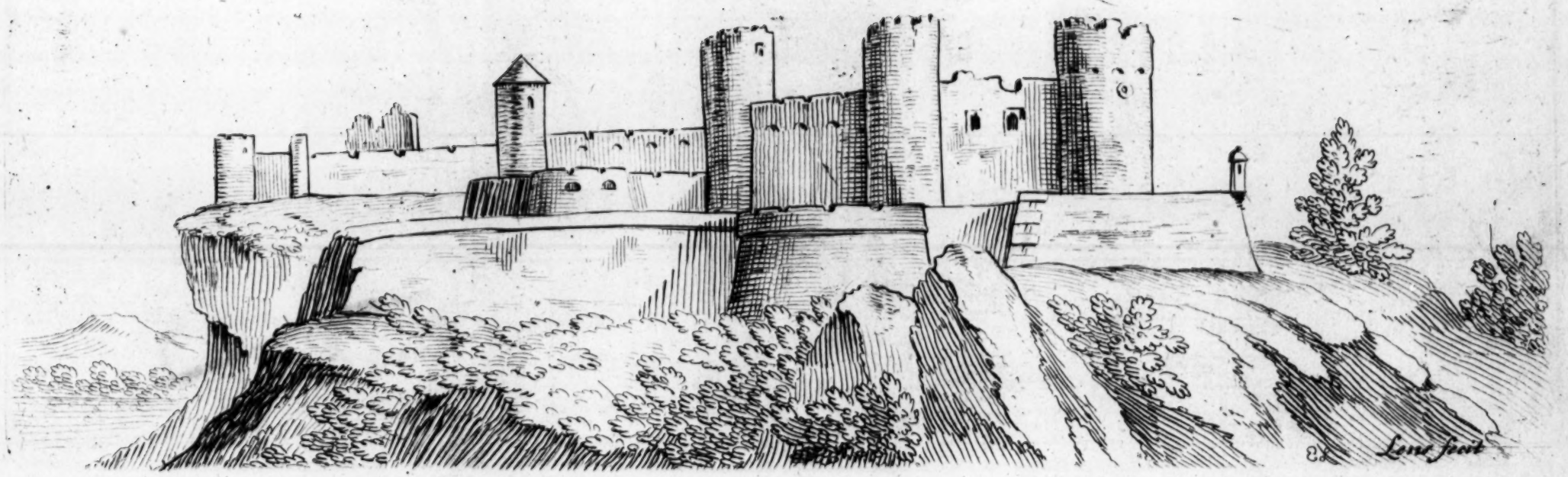

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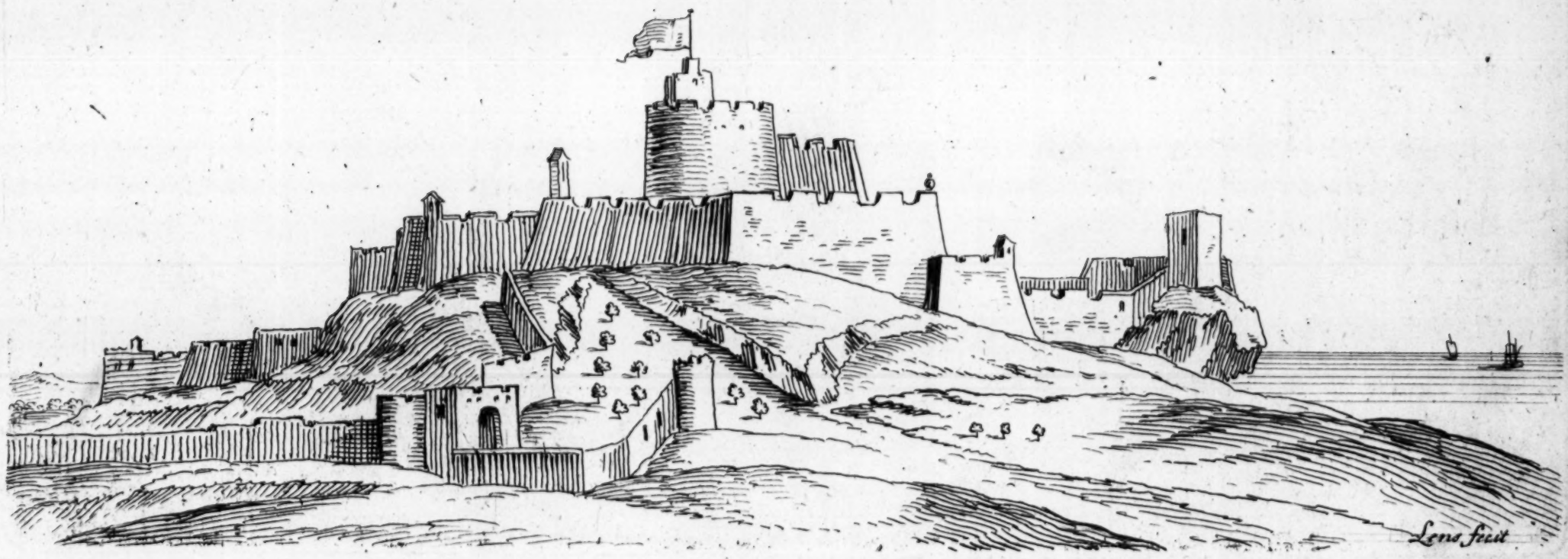
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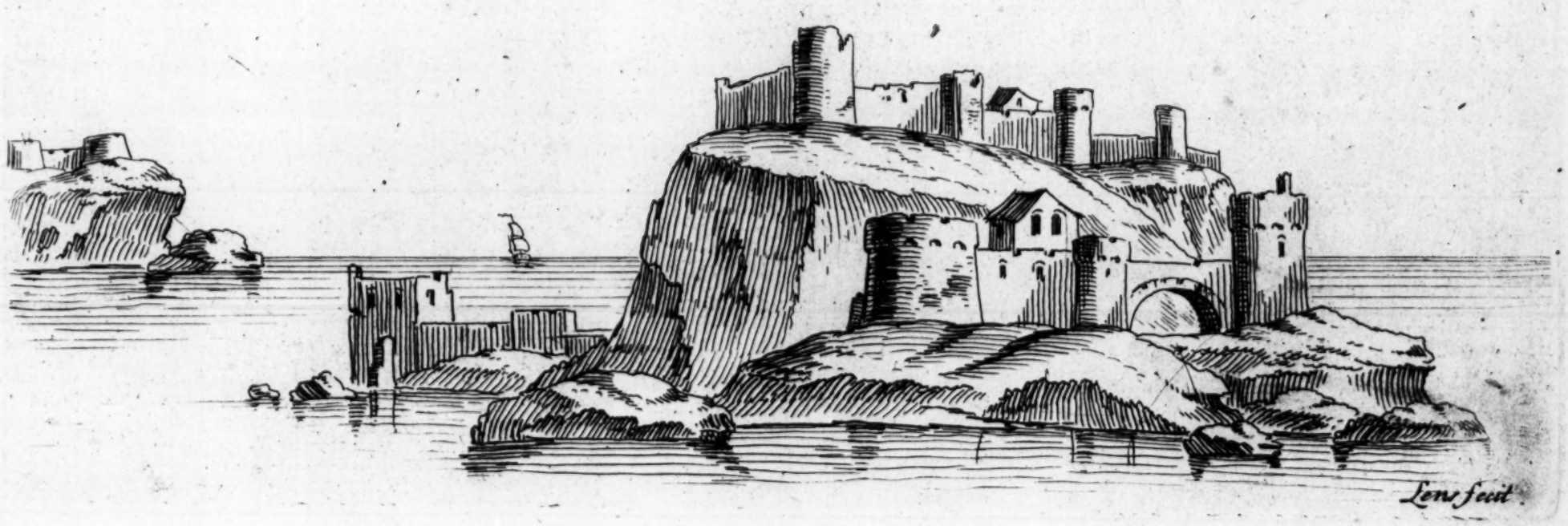
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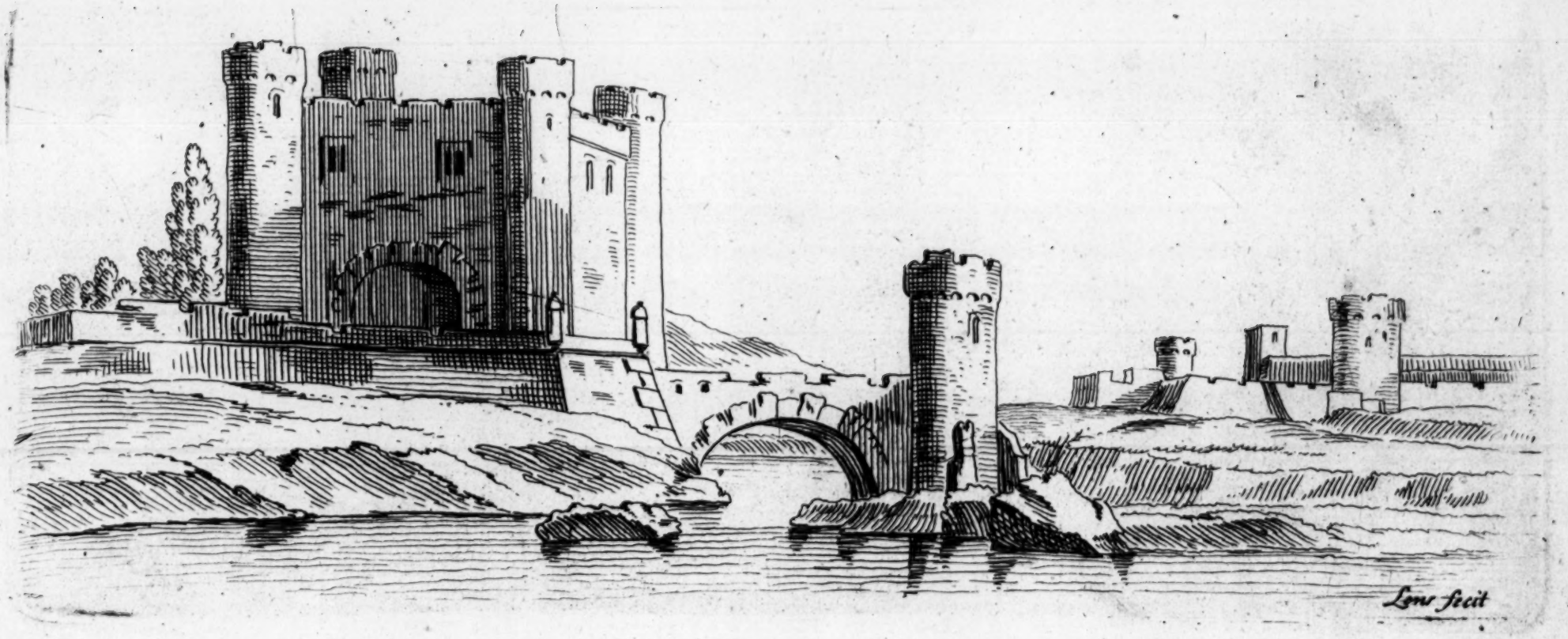

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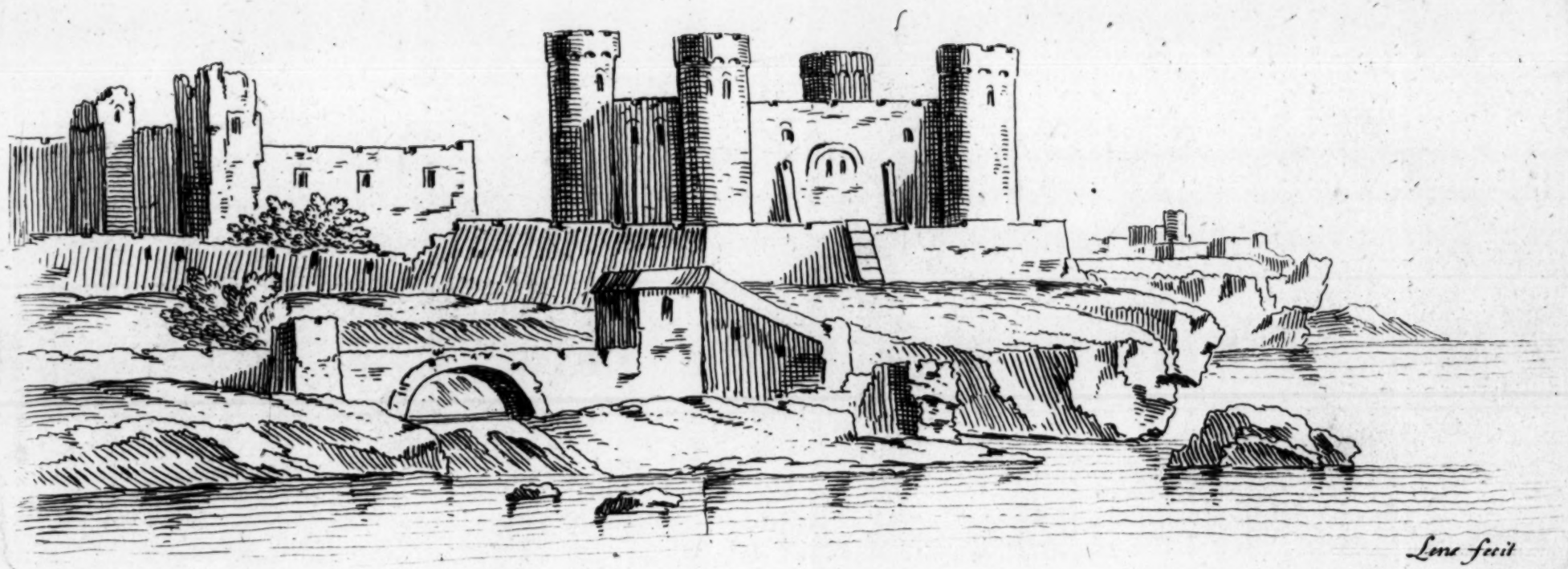

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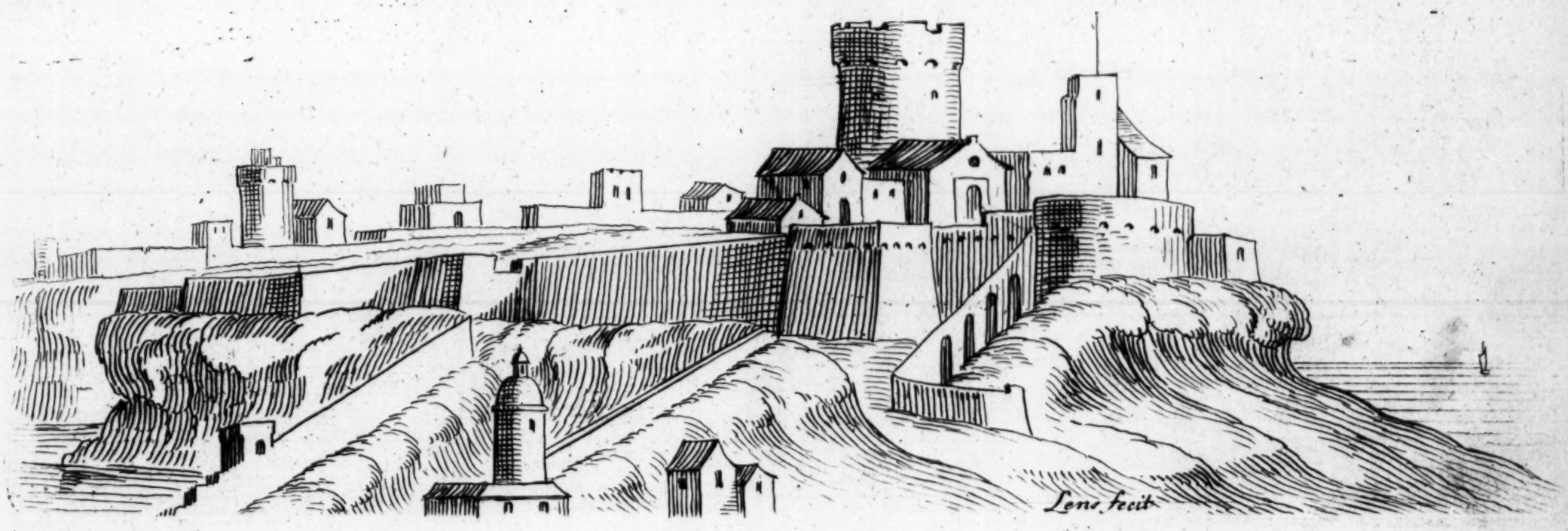
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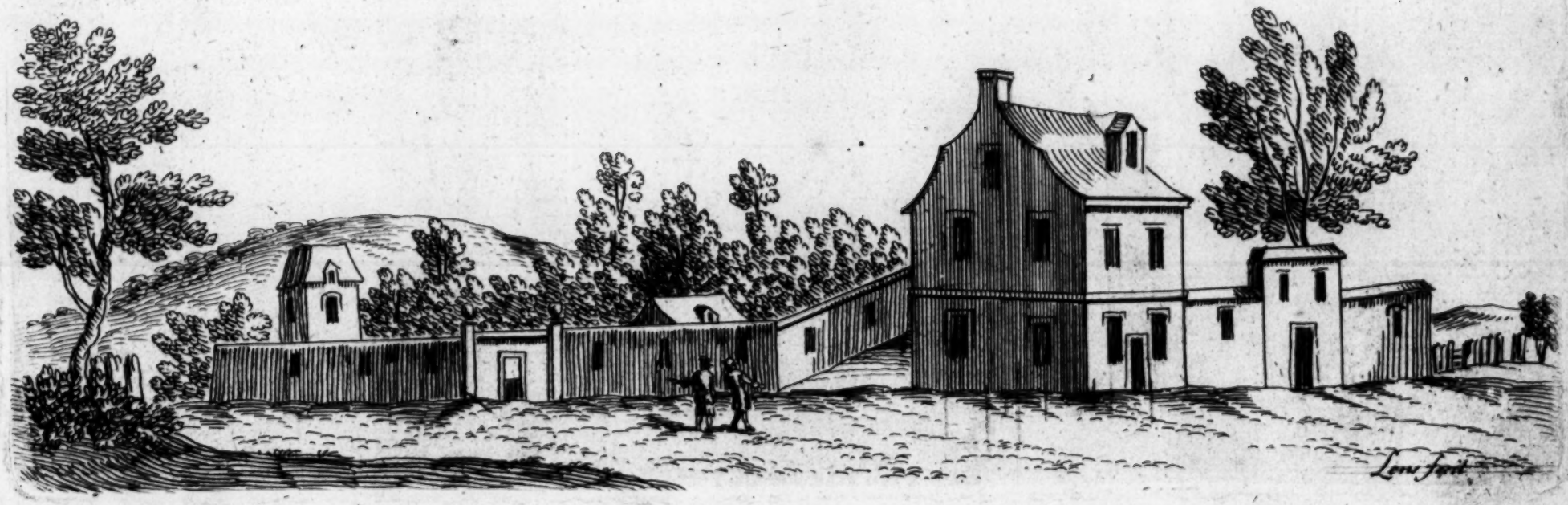

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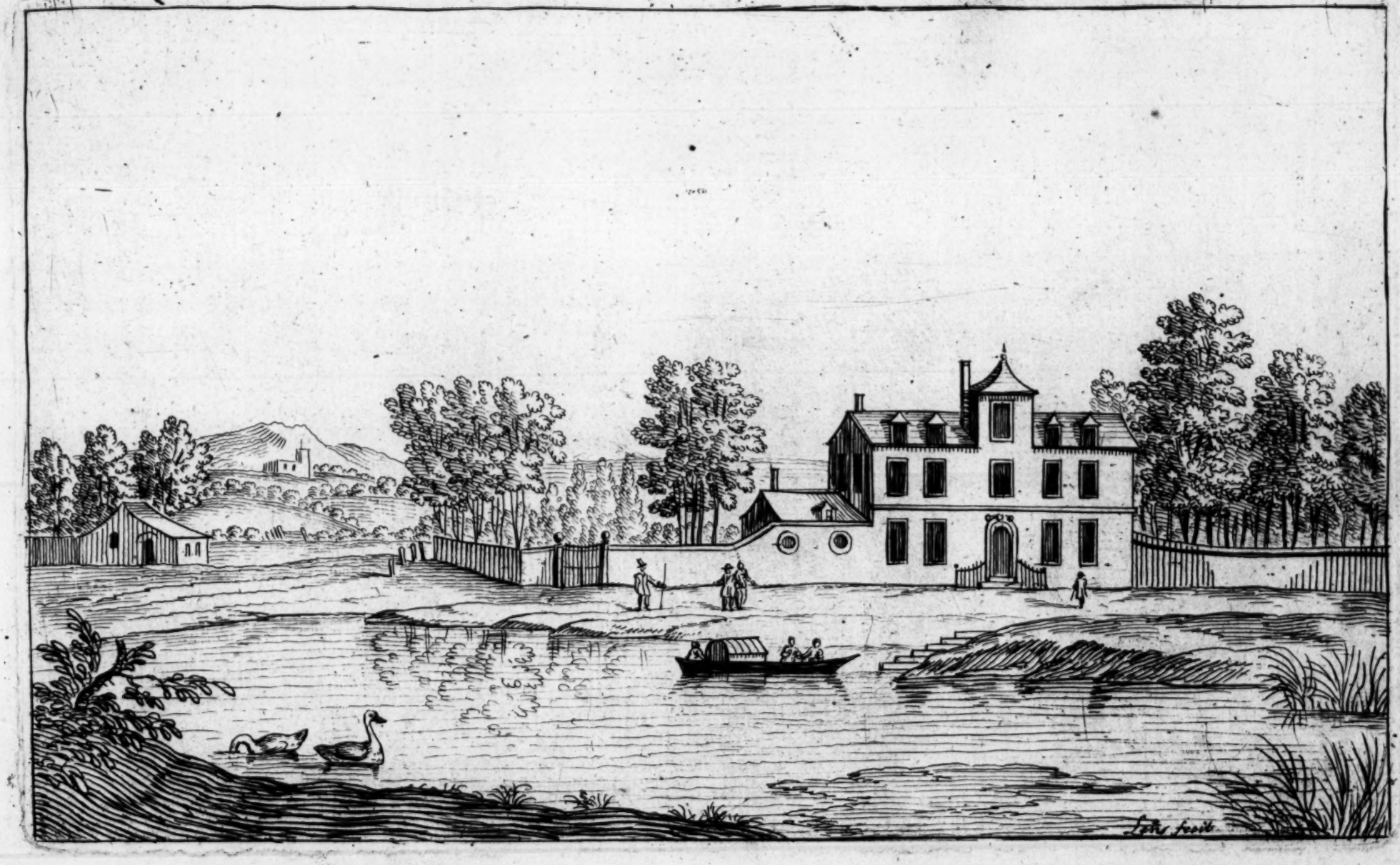

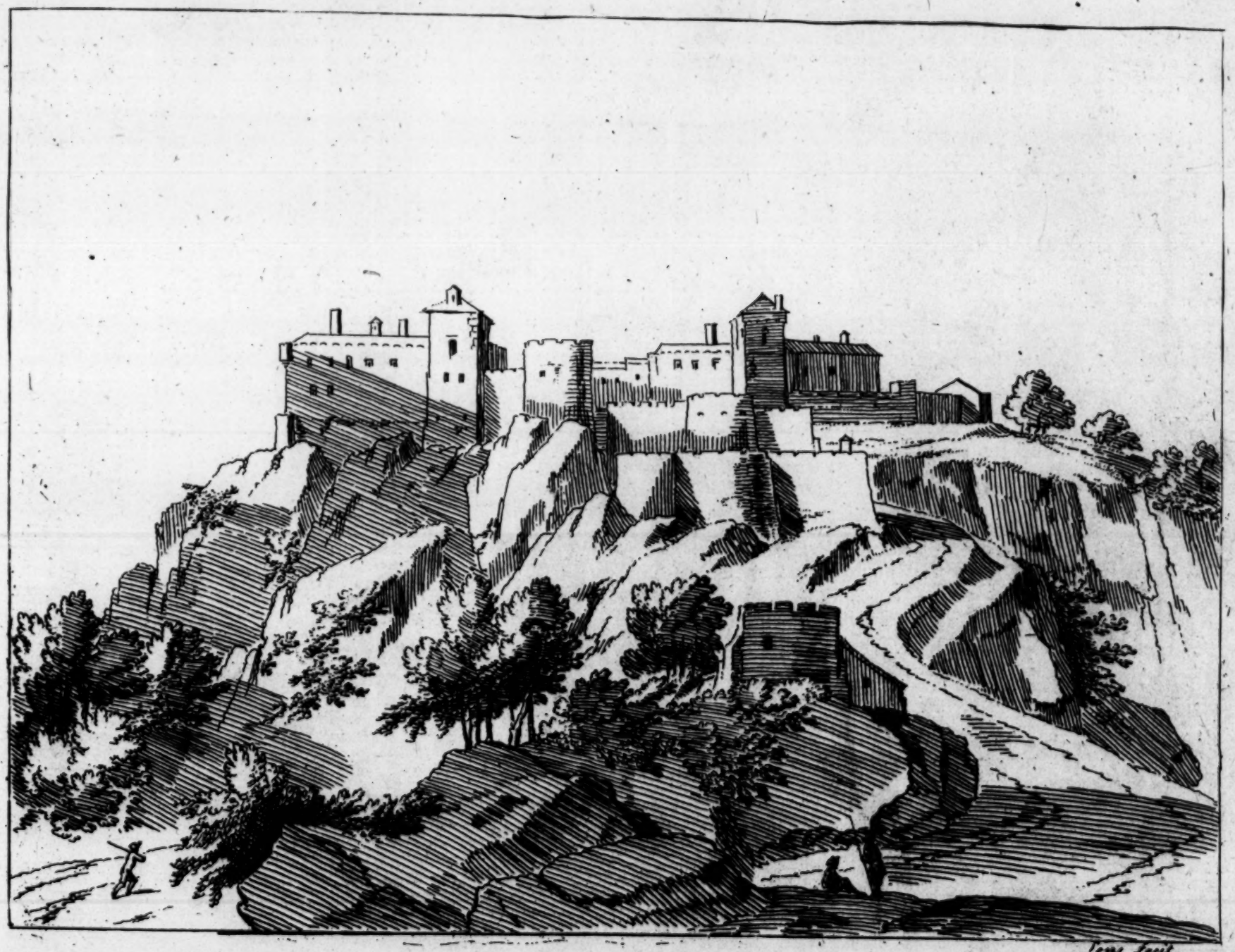

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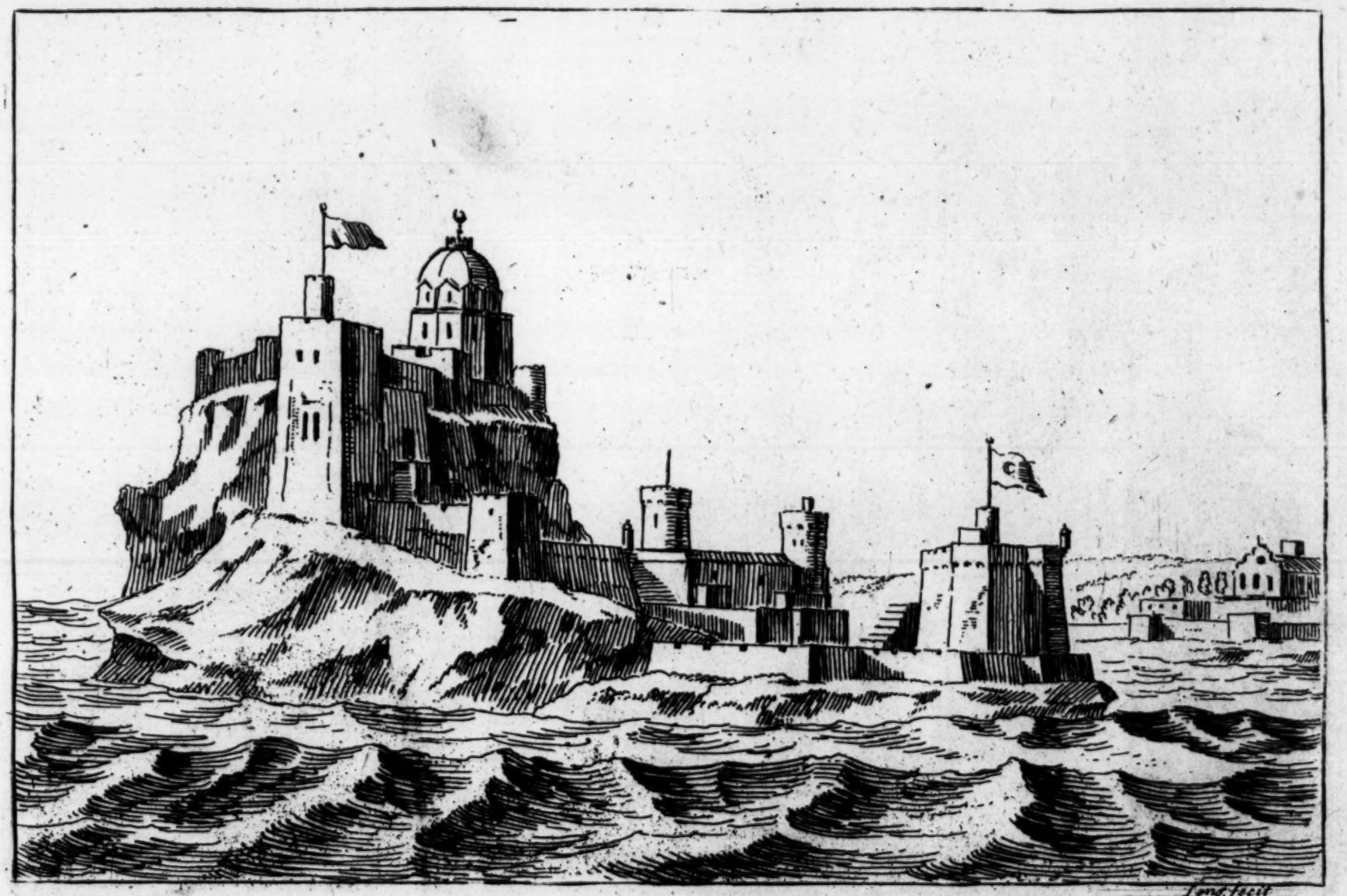

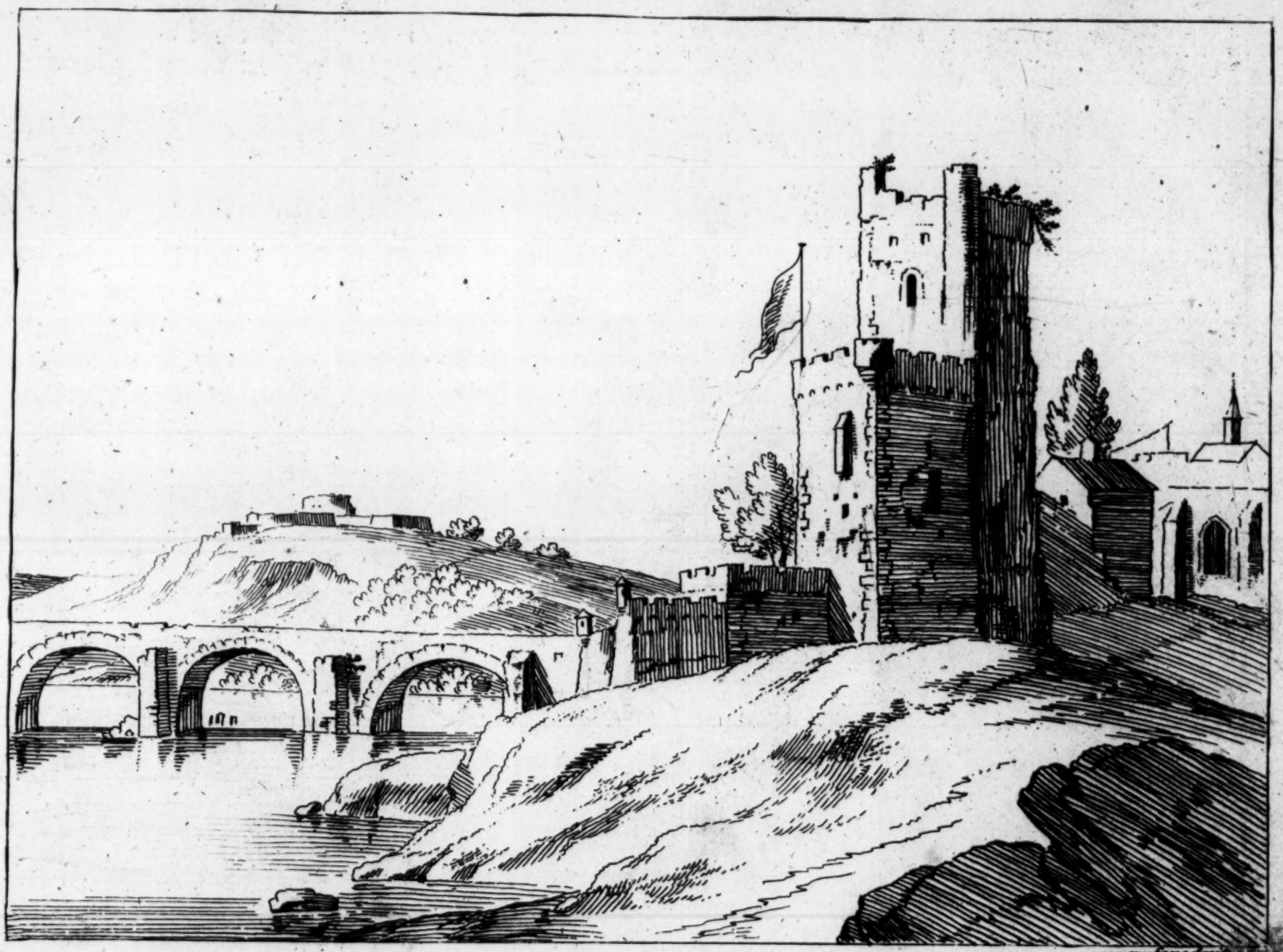

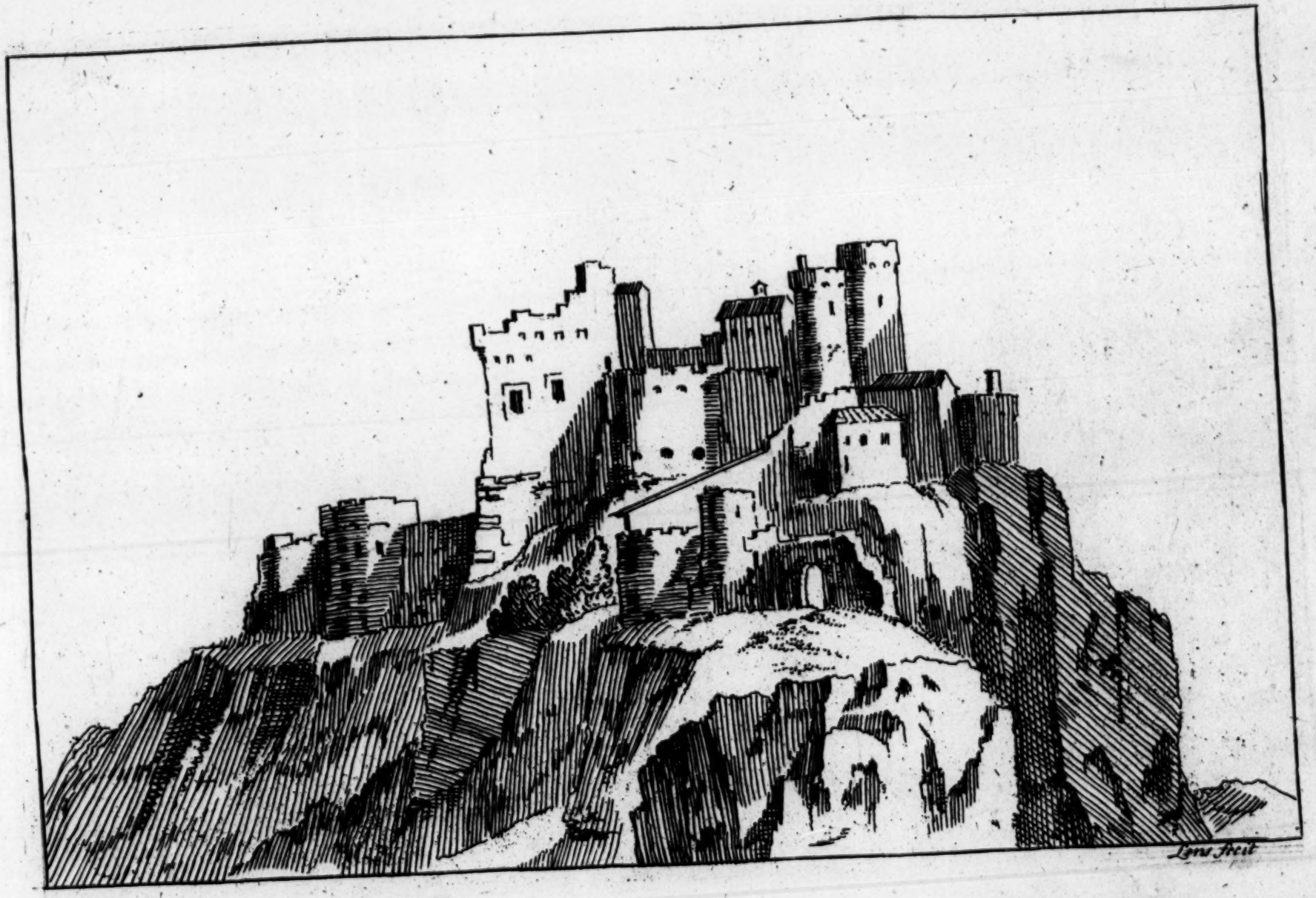

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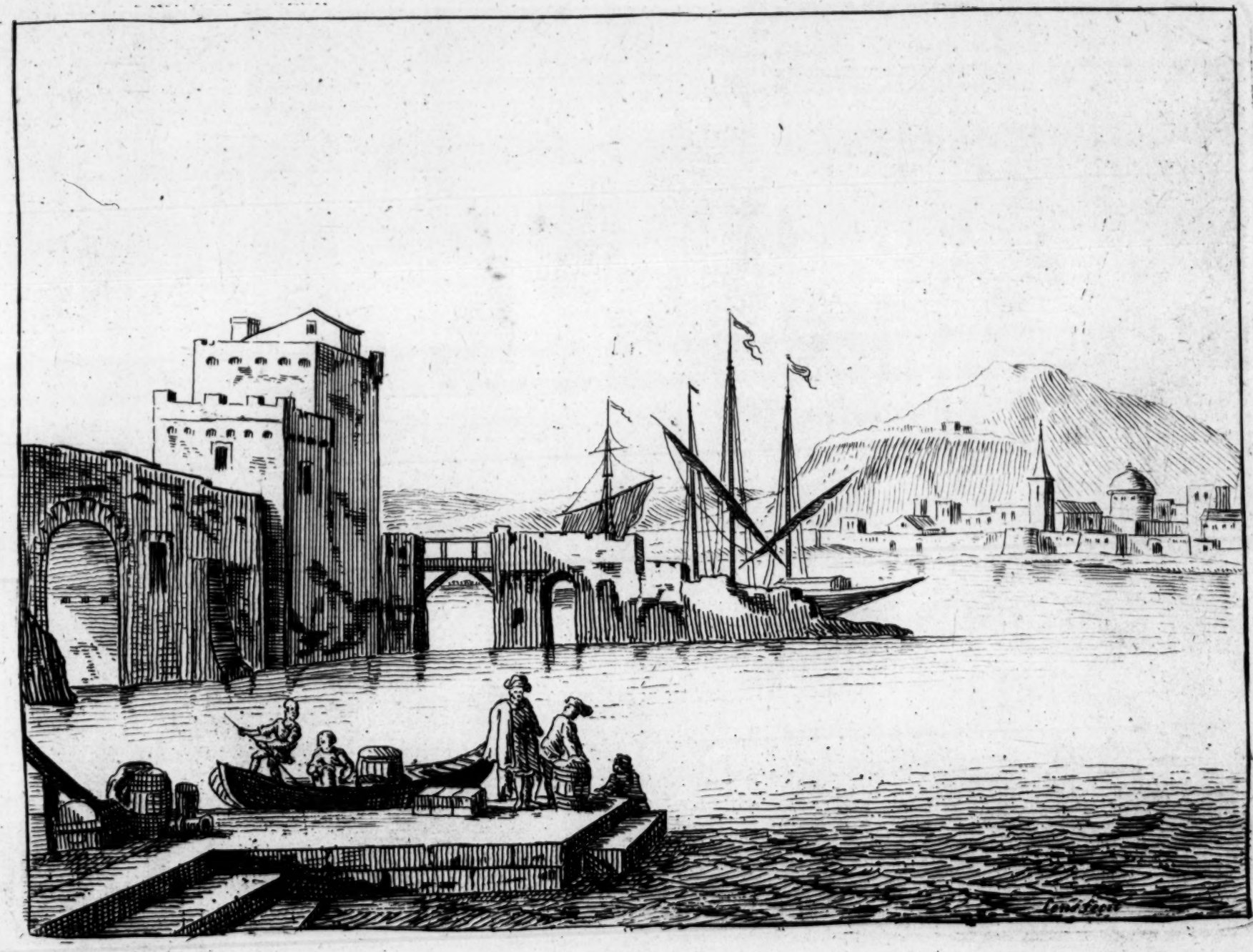

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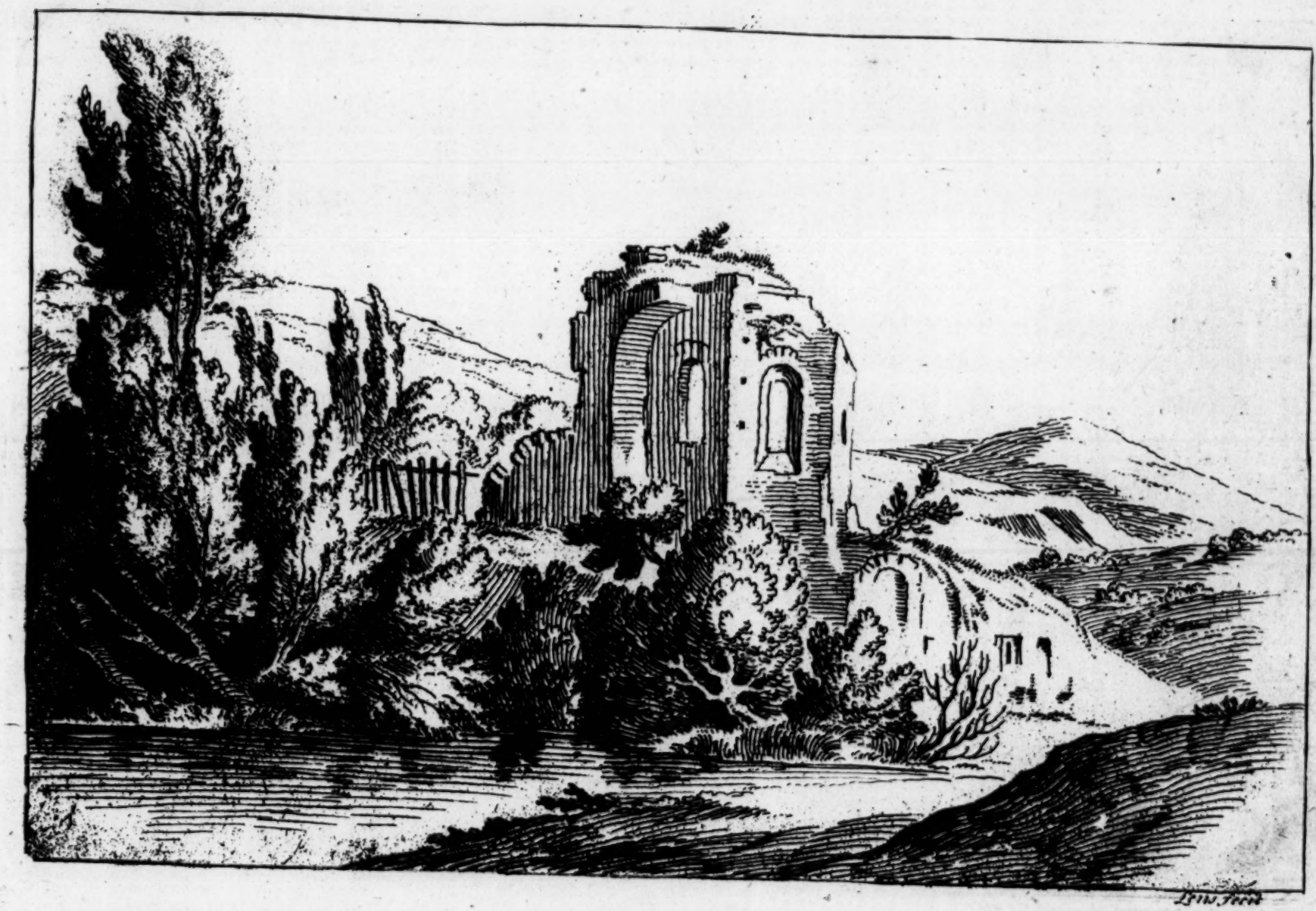

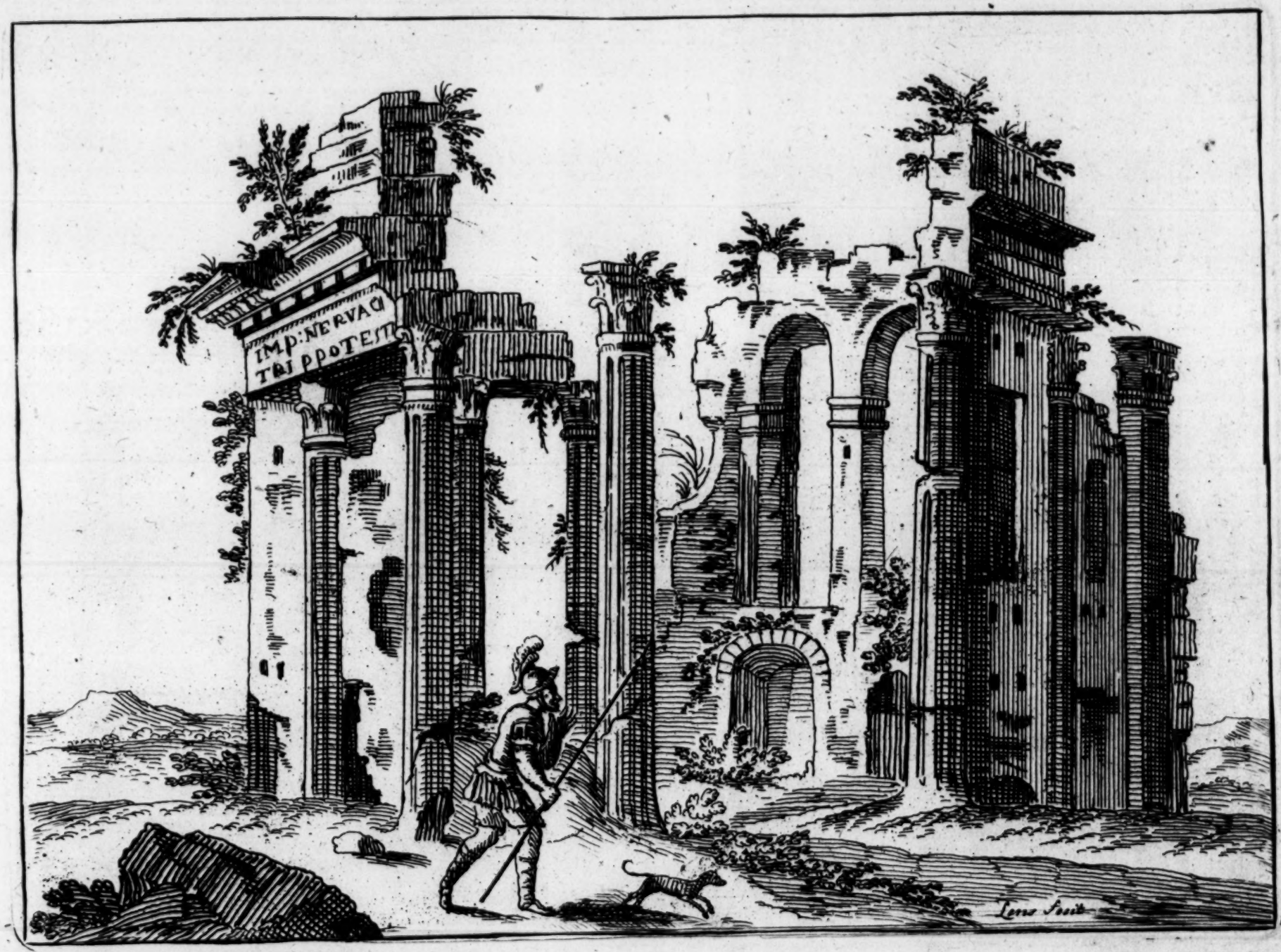
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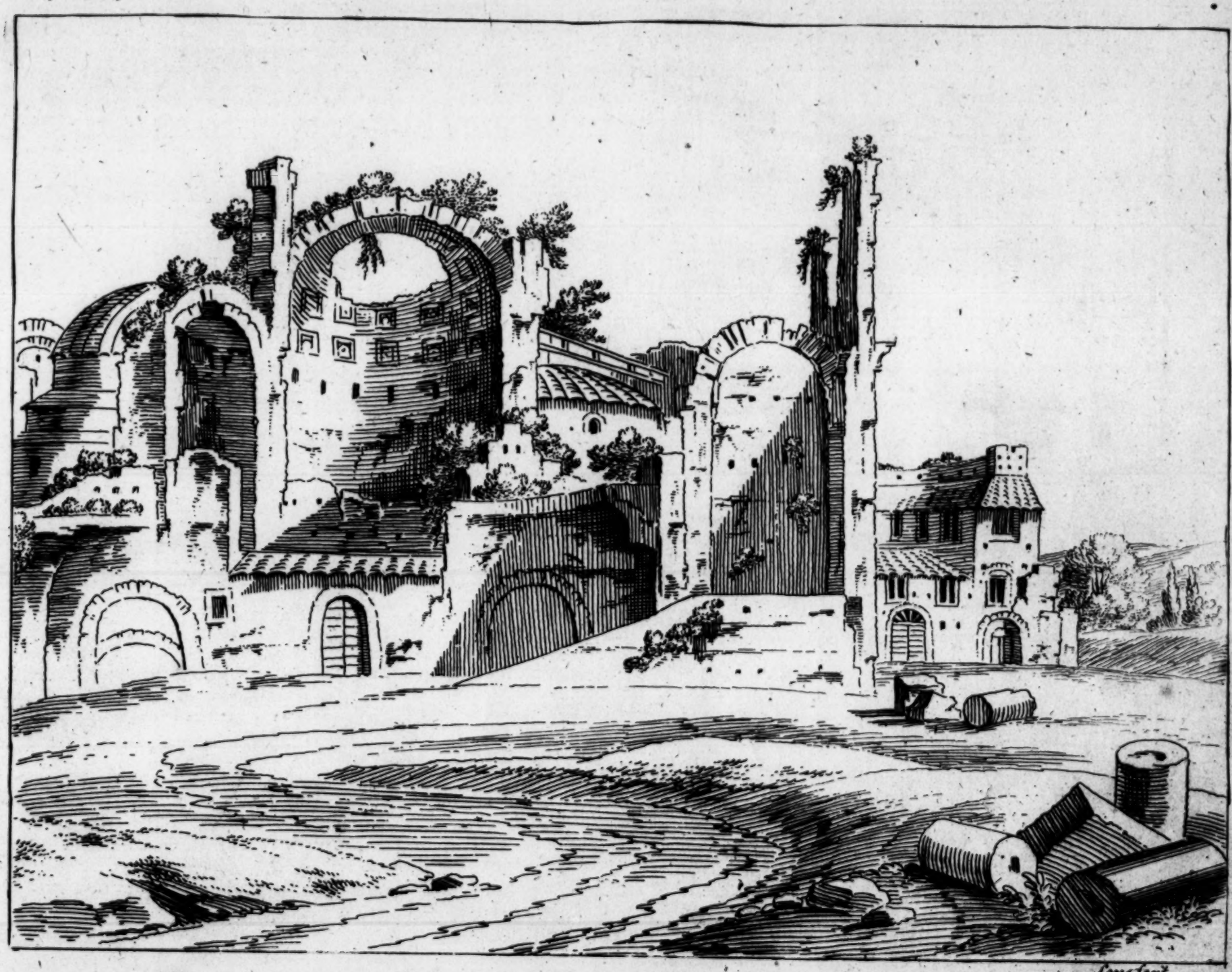

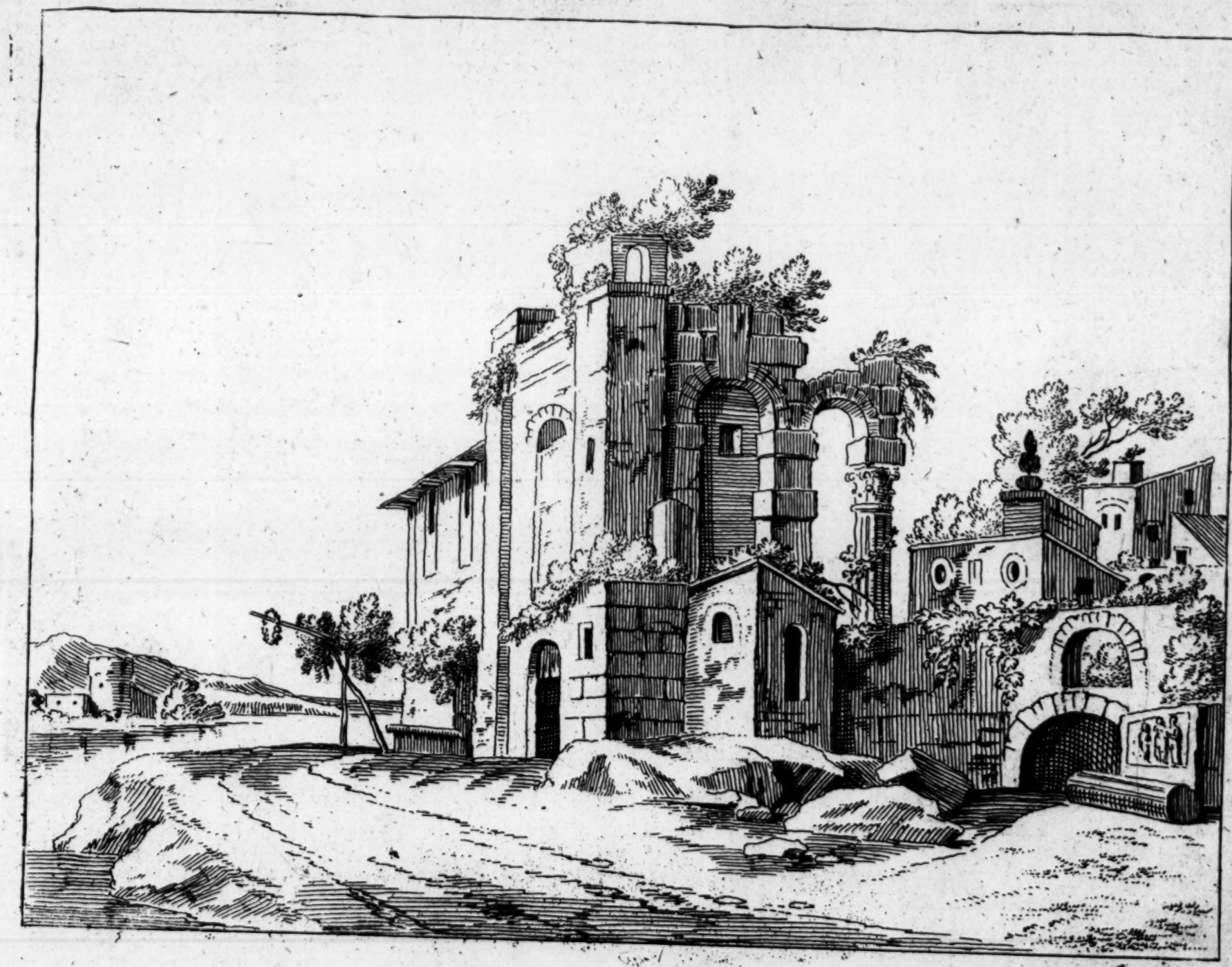

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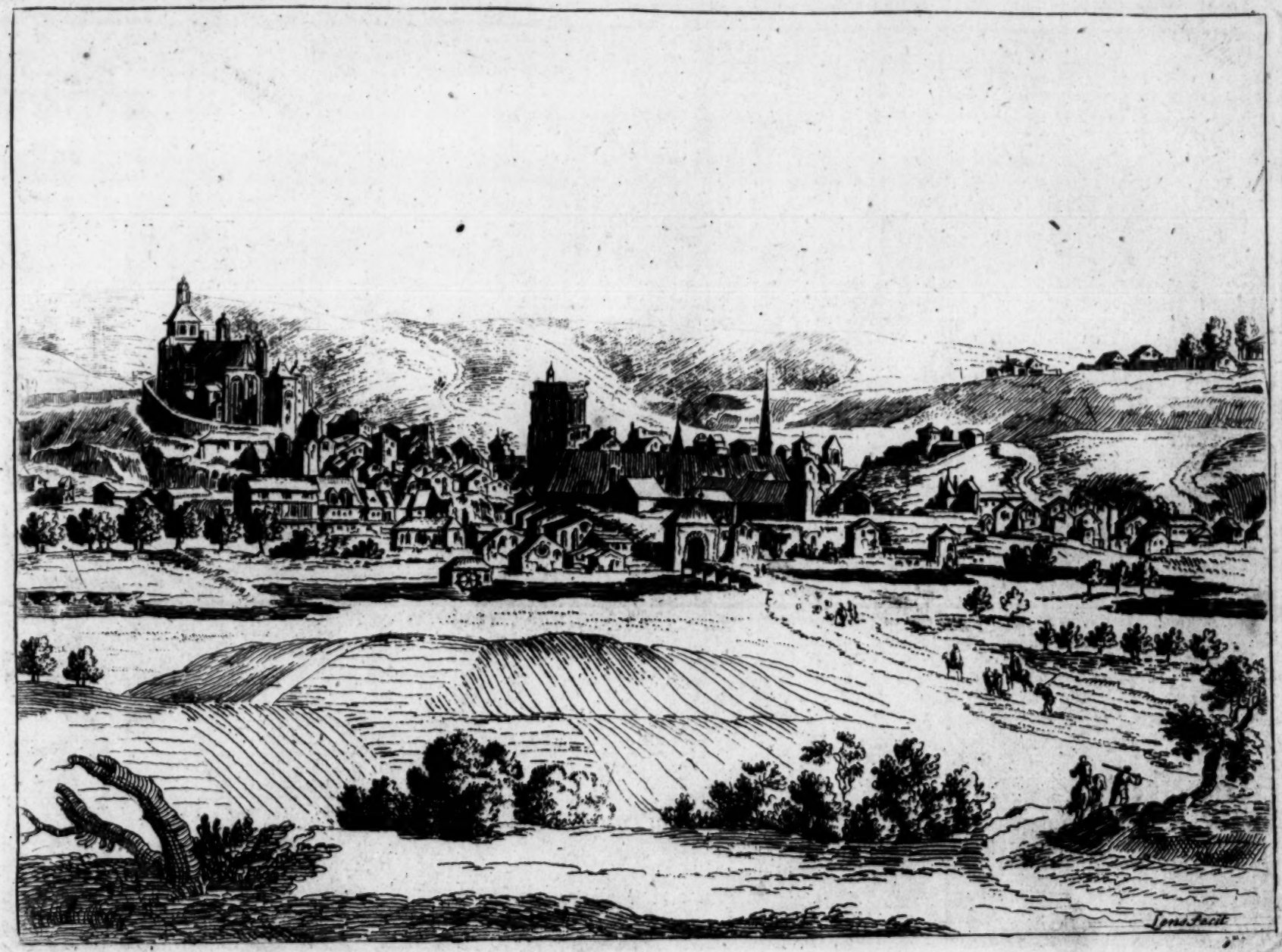

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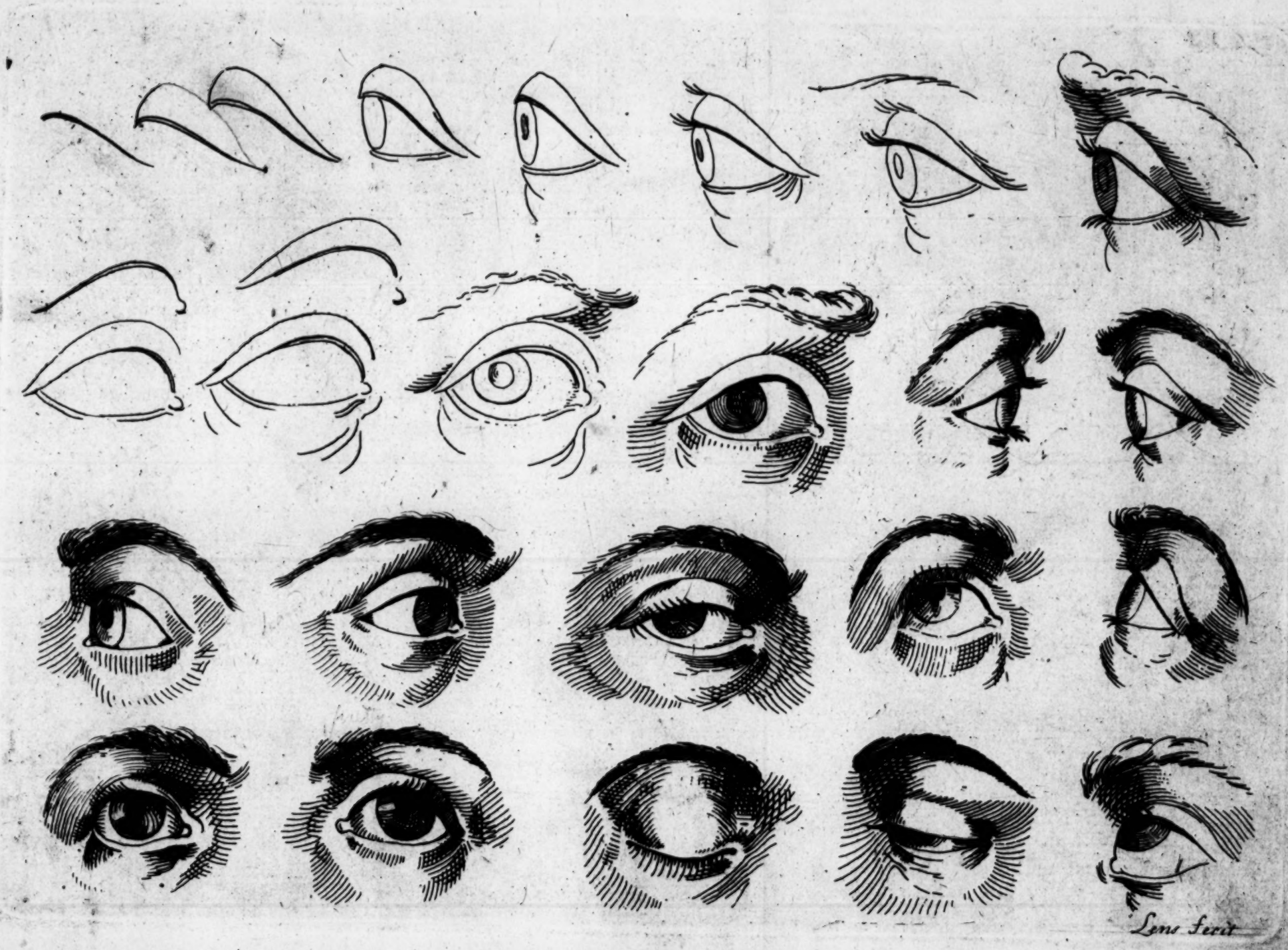
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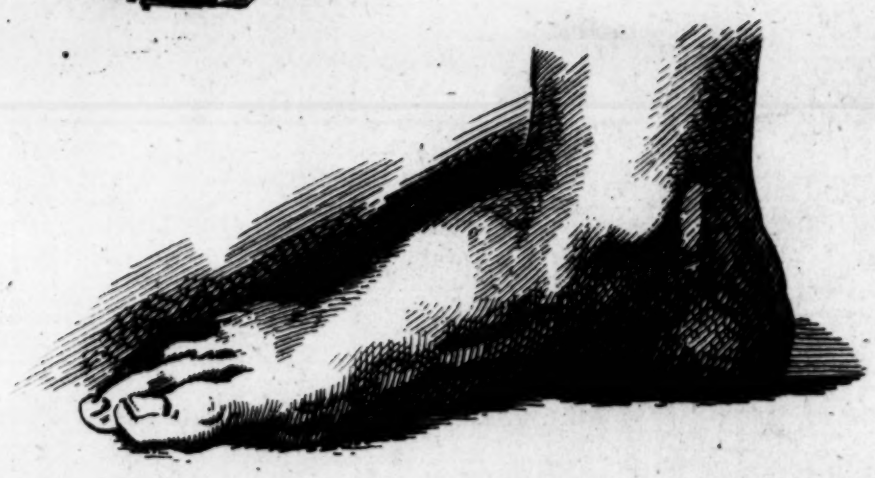

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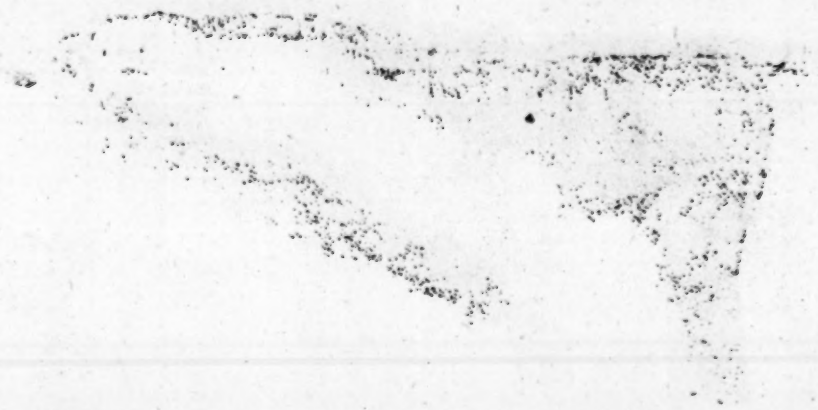

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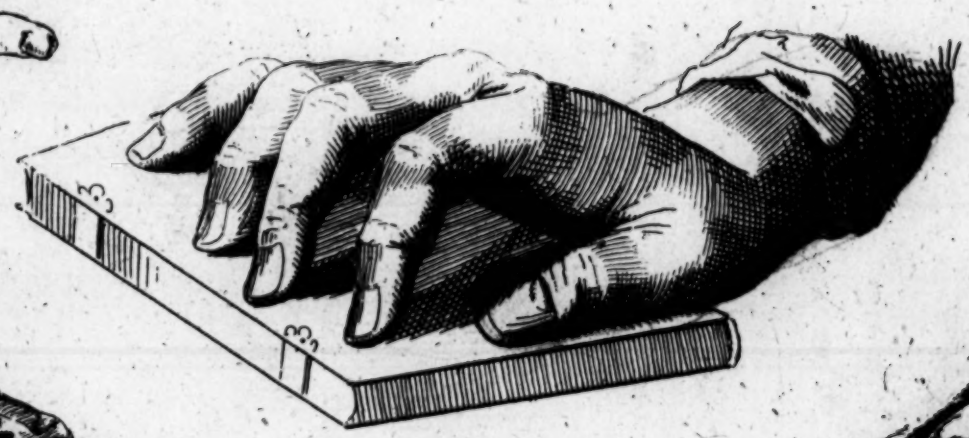

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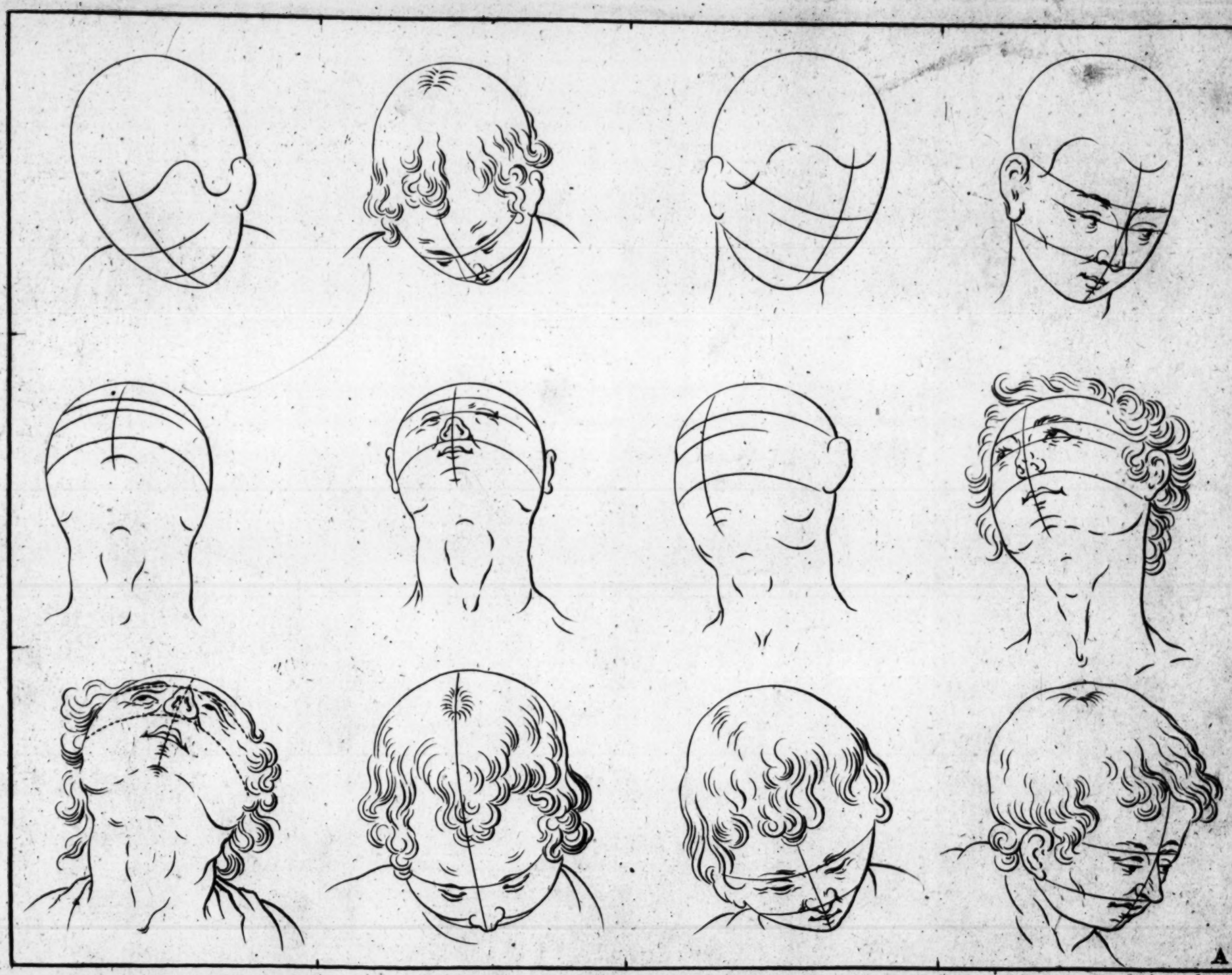

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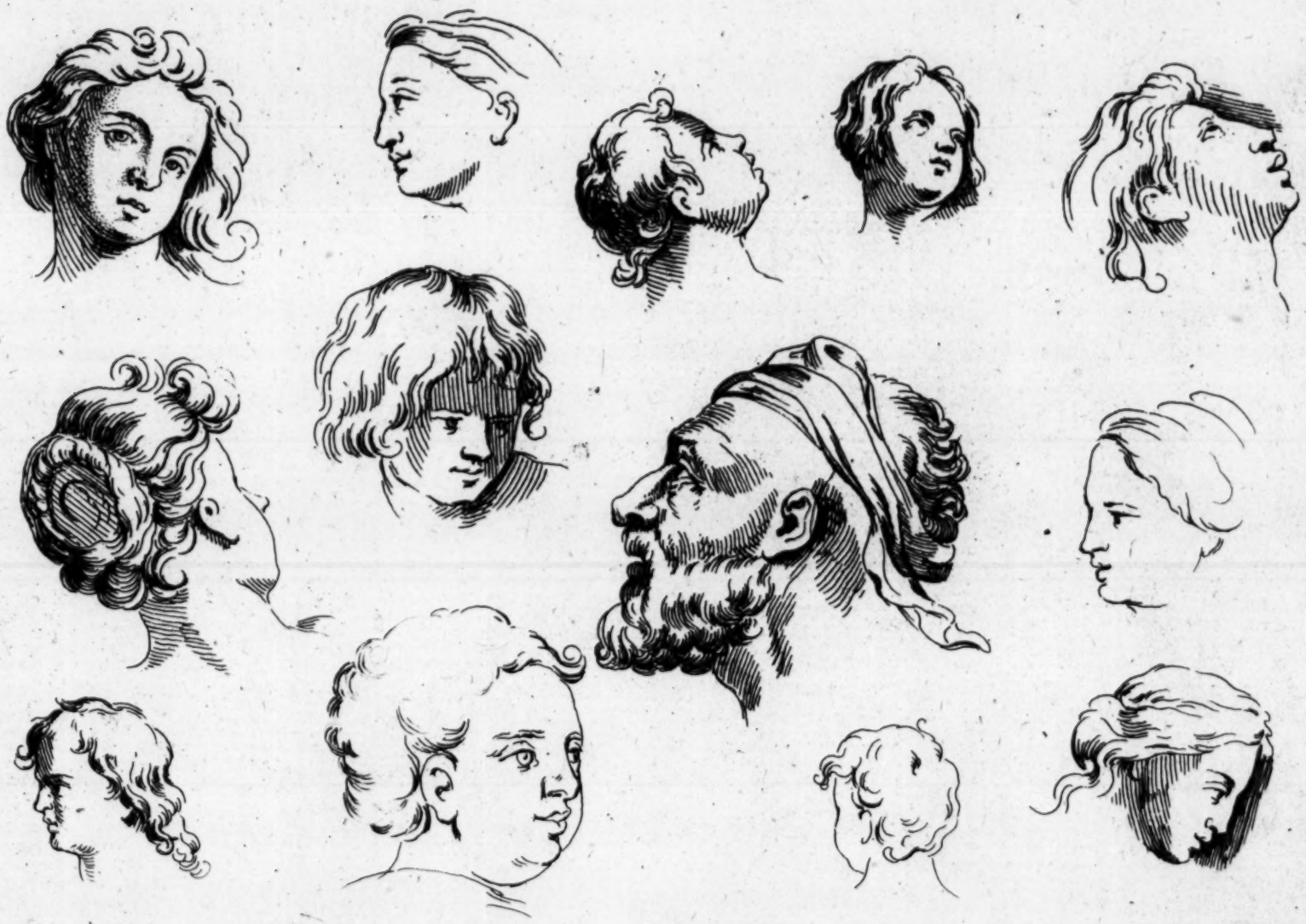

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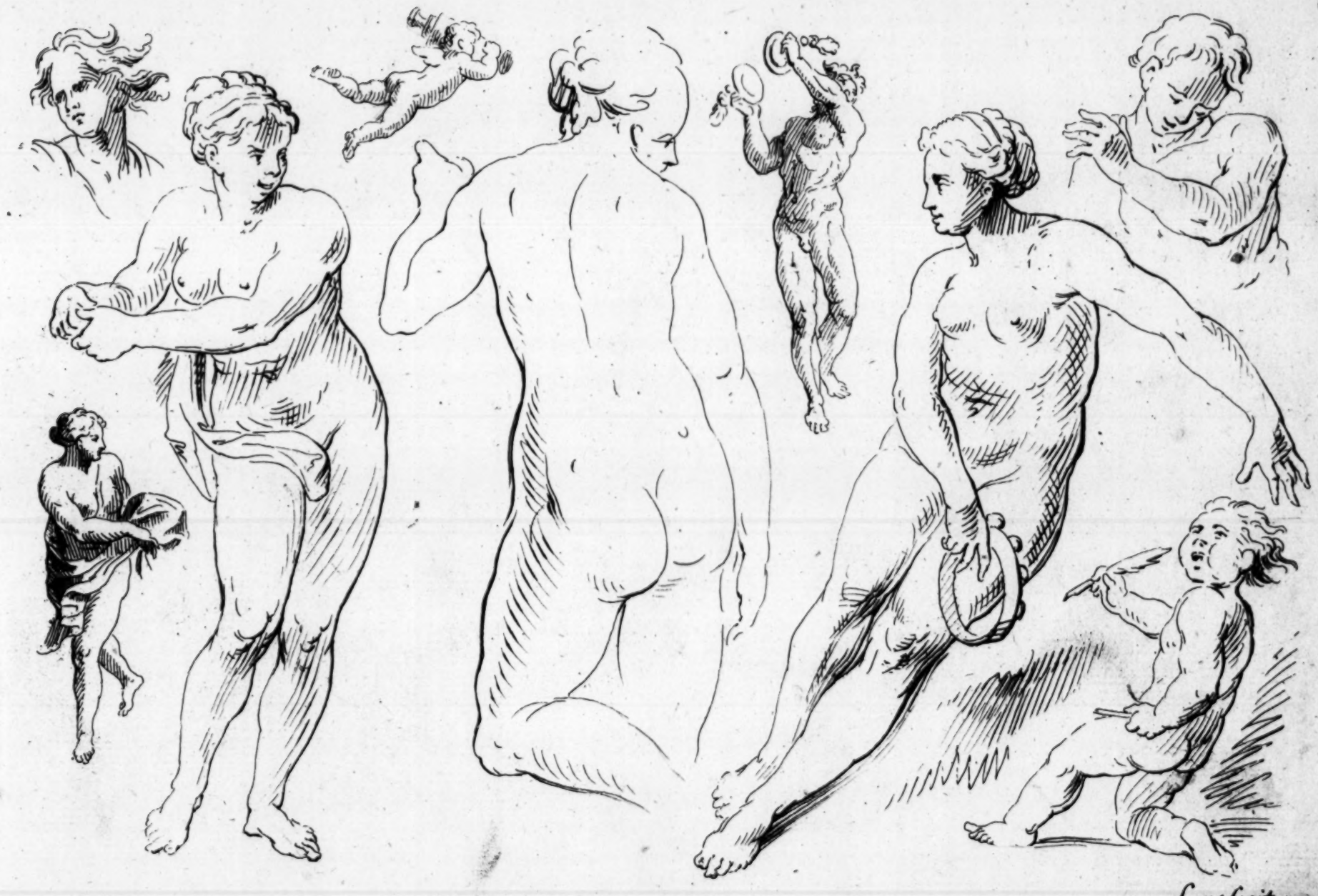

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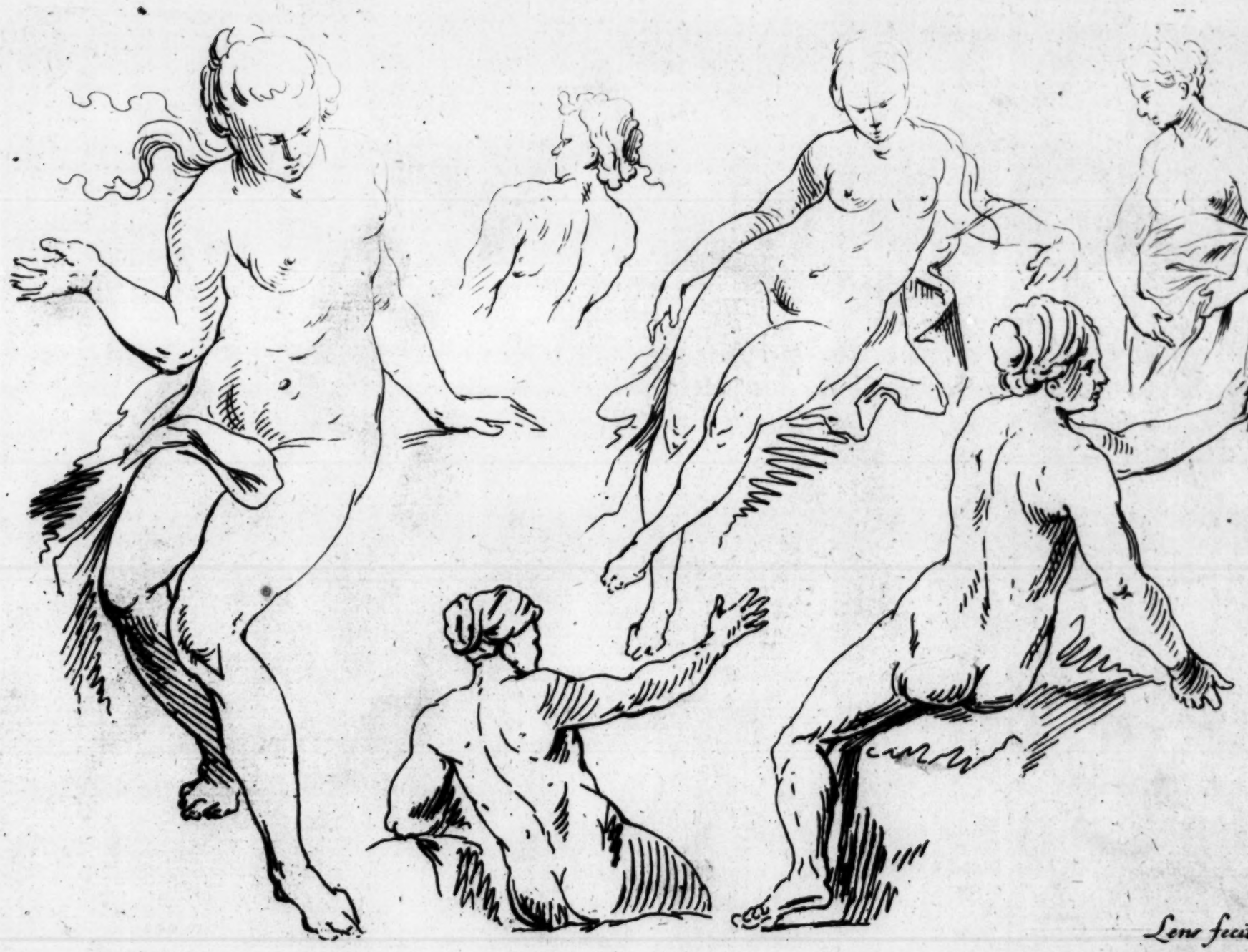

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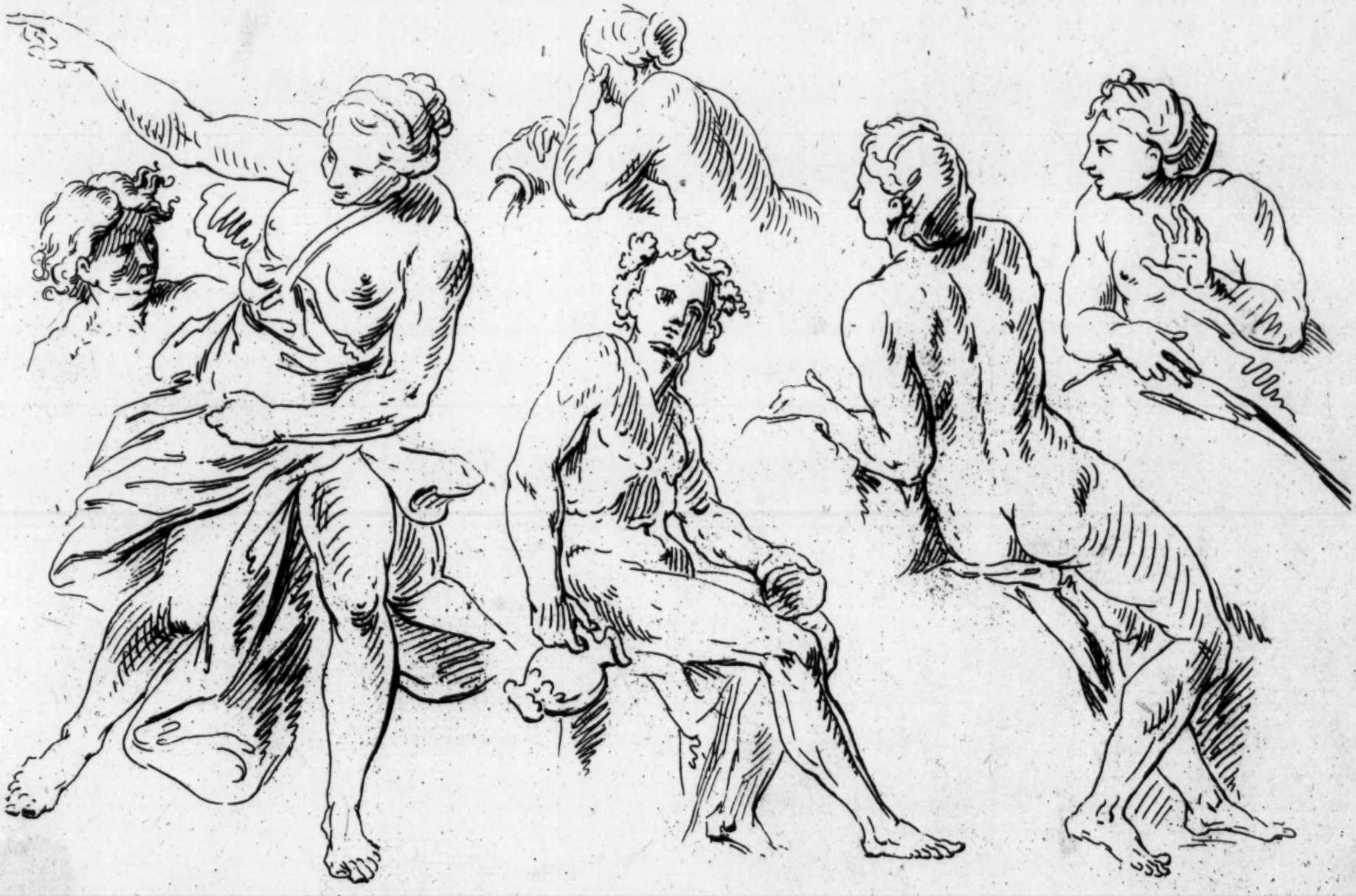

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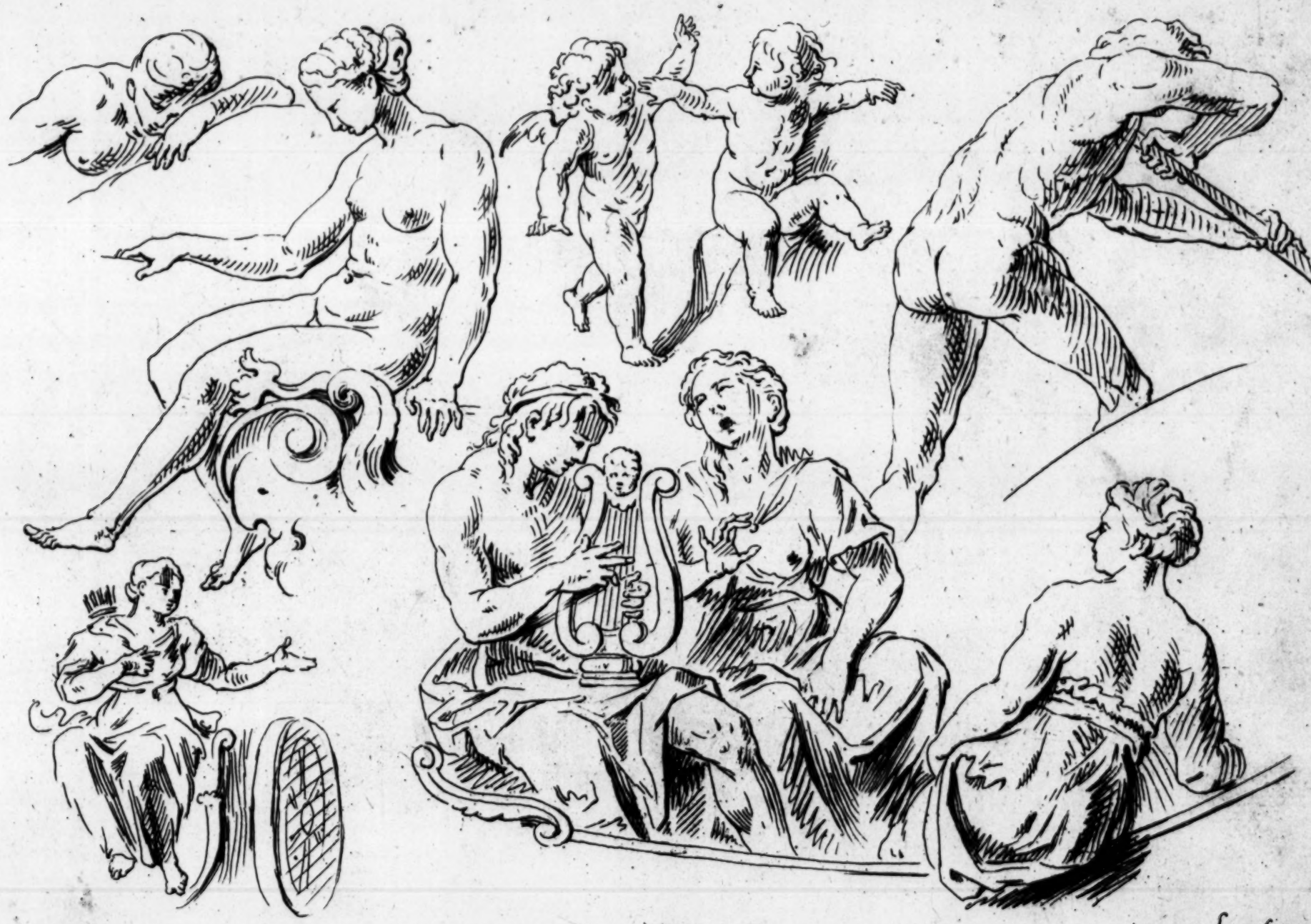

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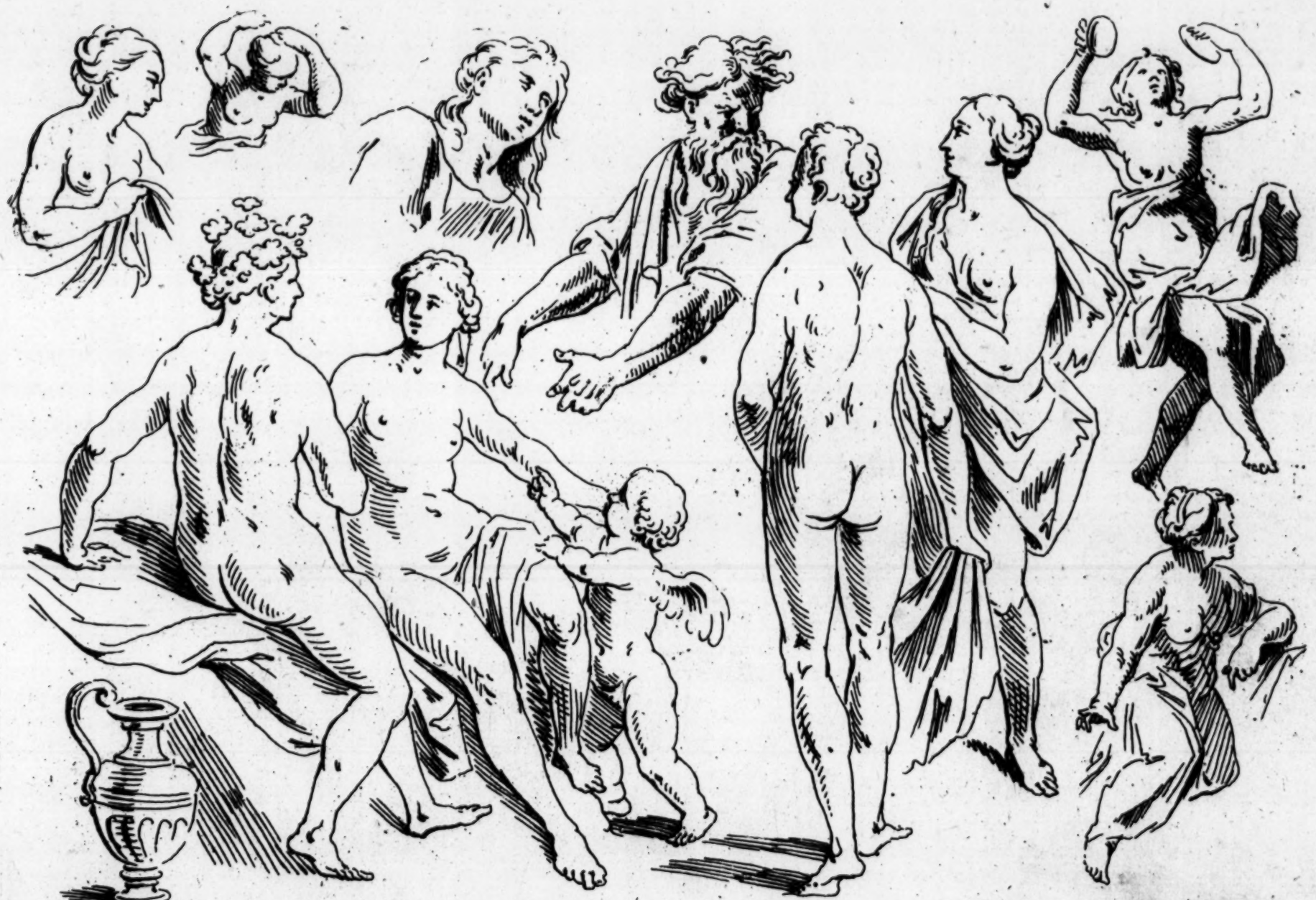

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